

Network A/V Server S-160

User's Manual

(Version1.0)



Introduction

- The S-160 is a 4 channel video server with a built-in MPEG-4 CODEC and Streaming Server. The main feature of the MPEG-4 CODEC and the built-in Streaming Server allows you to monitor real time images from remote locations via Internet. S-160 features a Sensor Input, Relay Output, RS232C port that is designed to control the functions of select pan/tilt/zoom cameras. S-160 supports both Static IP and Dynamic IP, and can change the Communication Port resulting in one IP address supporting multiple S-160 video servers. In summary, S-160system provides multiple access/control options to the user.

The examples of access/controls are as follows:

- To get SMS message through Mobile Phone and E-mail message from PC when events occur.
- To record Event in FTP server installed in remote place or S-160.
- To search / delete / down-load / replay the recorded video.
- To support various wireless devices such as Mobile Phone, PDA to see real time Video in Wireless Internet handset.

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Software, Server and service may be charged according to change of policy or may be stopped without prior notification. Appearance, function and specification may be changed without prior notification. Our company assumes no responsibility for visible or invisible loss resulted from changes in policy or products.

IMPORTANT NOTES

- Before operating the Vaddio StreamVIEW, please read the entire manual thoroughly. The system was designed, built and tested for use indoors, and with the provided power supply and cabling. The use of a power supply other than the one provided or outdoor operation has not been tested and could damage the unit and/or create a potentially unsafe operating condition.
- Do not operate the S-160 if the unit has been dropped or damaged. In this case, a Vaddio technician must examine the product before operating.
- To reduce the risk of electric shock, do not immerse in water or other liquids and avoid extremely humid conditions.
- Do not attempt to take the S-160 apart. There are no user-serviceable components inside.
- Do not use this product in connection with life safety or life monitoring related devices, i.e., medical apparatus.
- Do not operate the S-160 under the following conditions for any circumstance:
 - Temperatures above 40°C (104°F)
 - Temperatures below 0°C (32°F)
 - High humidity, condensing or wet environments
 - Dusty environments
 - In inclement weather or under severe vibration

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1. Feature

1. Feature

1.1 Unpacking

Carefully remove the product and all of the parts from the packaging. Unpack and identify the following parts:



S-160



Power Adapter



Software CD



Cross Cable

The content of the packaging includes, S-160 Main Unit, Power supply, User Manual, Software CD, Cross Cable (for installation only). Please check contents before starting installation. Be sure to use the provided power supply for the S-160. The Cross Cable is used only for Pre-View of Video before set-up and change of Network Information.

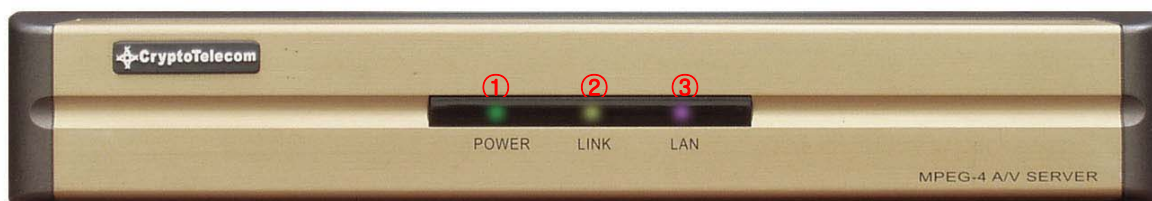


Use only the power supply provided with the S-160 system.

Use of any unauthorized power supply will void any and all warranties.

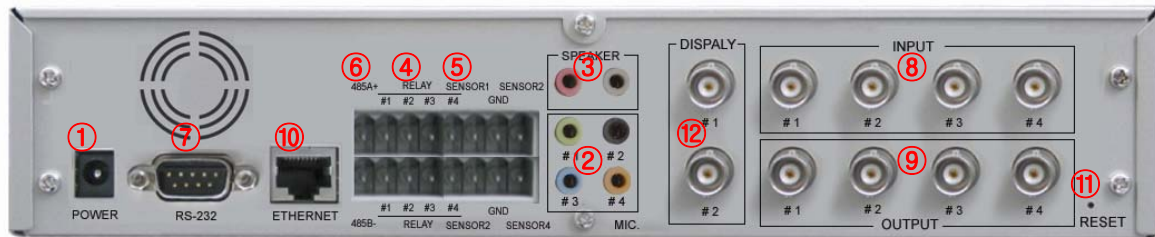
1.2 External View

1.2.1 Front view



- 1) **POWER** : Light on when power is supplied.
- 2) **LINK** : Light on when LAN Cable is connected to S-160.
- 3) **LAN** : Light on when connected to Network.

1.2.2 Rear view



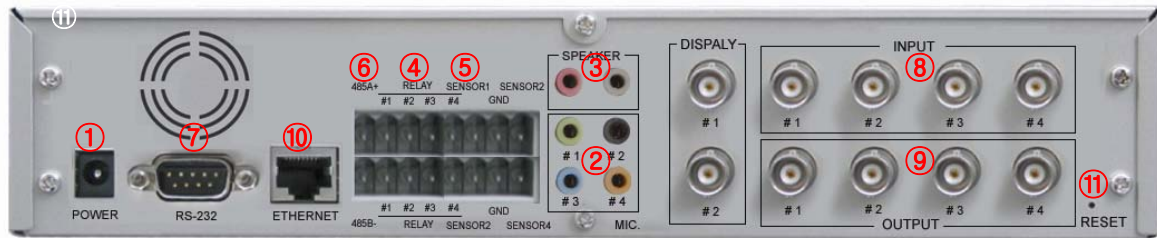
- 1) **Power Supply** : Exclusive (provided) Adapter only
- 2) **Micro Phone Port** : To connect Microphone
- 3) **Speaker Port** : To connect Speaker
- 4) **Relay Output** : Output port with embedded Relay.
- 5) **Sensor Input** : Sensor Input port, to be set in Inner Setting and to be used without regard to N/C or N/O
- 6) **RS485 Port** : Input / Output Port of RS485
- 7) **Serial Port** : To control of Pan/Tilt/Zoom of Camera and connect to PLC or outer Devices (RS232)
- 8) **Video In** : Input port to connect with signal output from Camera, VTR, Quad, DVR
- 9) **Video Out** : Output of the same video signal that put into the Video Input Port.
- 10) **LAN** : LAN Cable port for Internet to connect to Internet
- 11) **Hardware Reset** : To initialize basic setting. Push and hold for seconds to start initialization.

2. Installation and Video Check

2. Installation and Video Check

2.1 Installation

On the assumption that User PC and S-160 Server is used under static IP, and S-160 is to be directly connected with User PC or Local Network, the installation procedure is to be ;



Pic. 2—1 Rear View

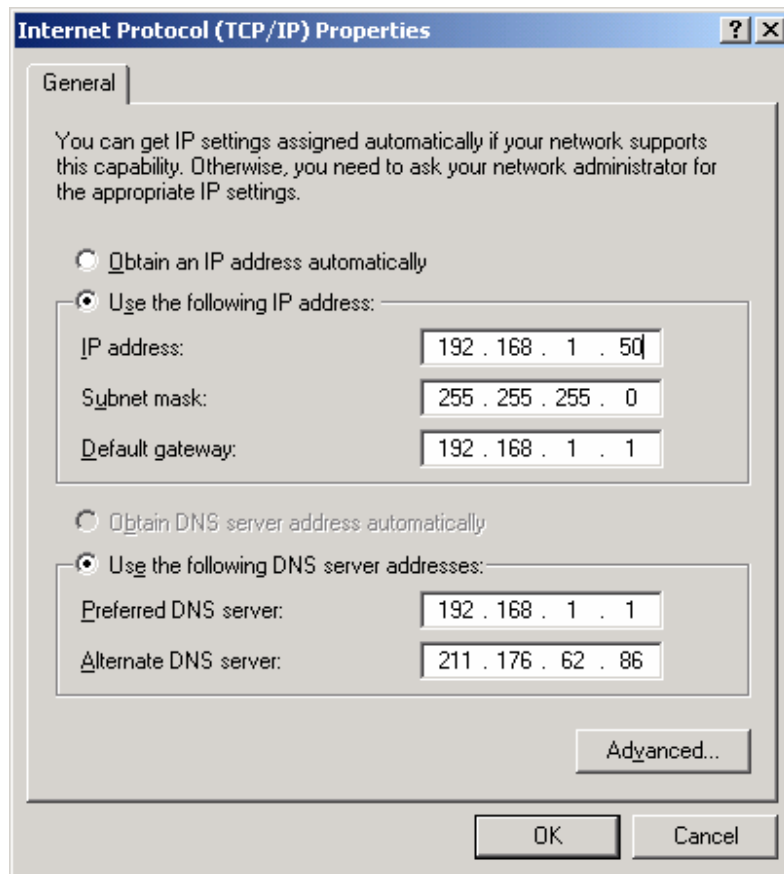
- 1) Connect Camera and StreamVIEW with Video Cable (8 of [Pic.2-1]).
- 2) If connecting a Pan/Tilt Camera for control, connect Cable into RS232 Port (7 of [2-1]) or RS485 Port (6 of [2-1]).
- 3) Connect StreamVIEW and PC with LAN Cable (Cross Cable) (10 of [2-1])
- 4) Turn on Camera and StreamVIEW (Use provided power supply only) (1 of [2-1])
- 5) Wait about 2 minutes after powering up the StreamVIEW, and then the LINK LED shows that the System has been booted normally.

2.2 Video Check

Basic network setting value of S-160 is to be ;

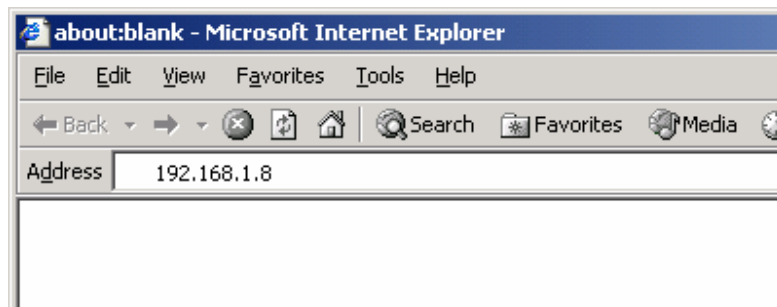
- ✓ IP Address : 192.168.1.8
- ✓ Subnet Mask : 255.255.255.0
- ✓ Gateway : 192.168.1.1

To connect S-160 in user's PC, change the setting value of PC network environment.



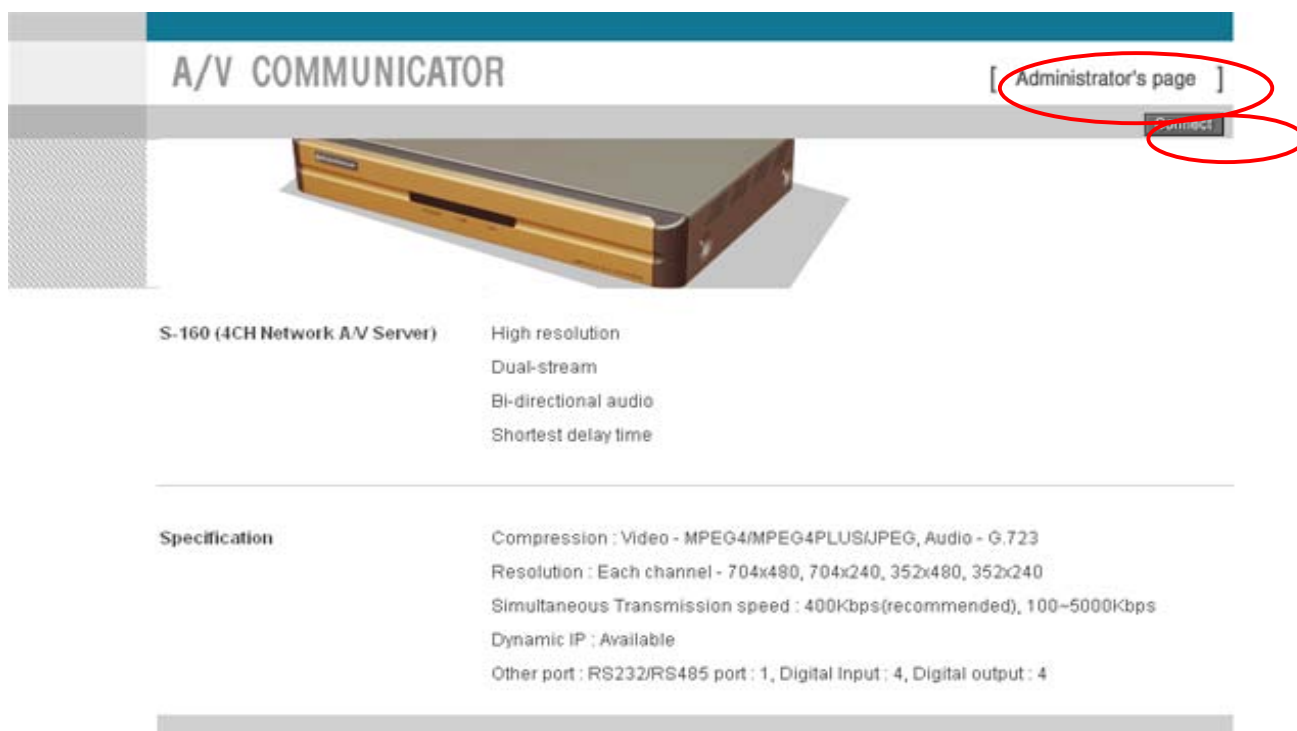
Pic. 2—2 Network Setting of User PC

- 1) Set IP Address, Subnet Mask and Gate-way of User's PC with 192.168.1.50, 255.255.255.0 and 192.168.1.1 as shown on [Pic. 2-2].



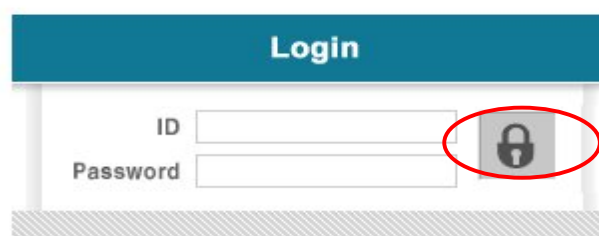
Pic. 2—3 Web Browser Input

- 2) Run Web Browser as shown on [Pic. 2-3] and input 192.168.1.8 in URL and click "Enter", then [Pic. 2-4] is to be shown. In case [2-4] does not appear, re-set Hardware (Reset Button (6) of Pic. 2-1) to return Network Environment of S-160 to default and run Web Browser, input 192.168.1.8 in URL line and click "Enter".



Pic. 2—4 S-160 Main Page

- 3) Click "Connect" Button of [Pic. 2-4].



Pic. 2—5 User login

- 4) Input ID and Password and click on the lock [Pic. 2-5] to see the Video feed.
- 5) User's Authority to see Video feed on S-160 is as follows ;

Table 2-1 User ID, Password, Rights

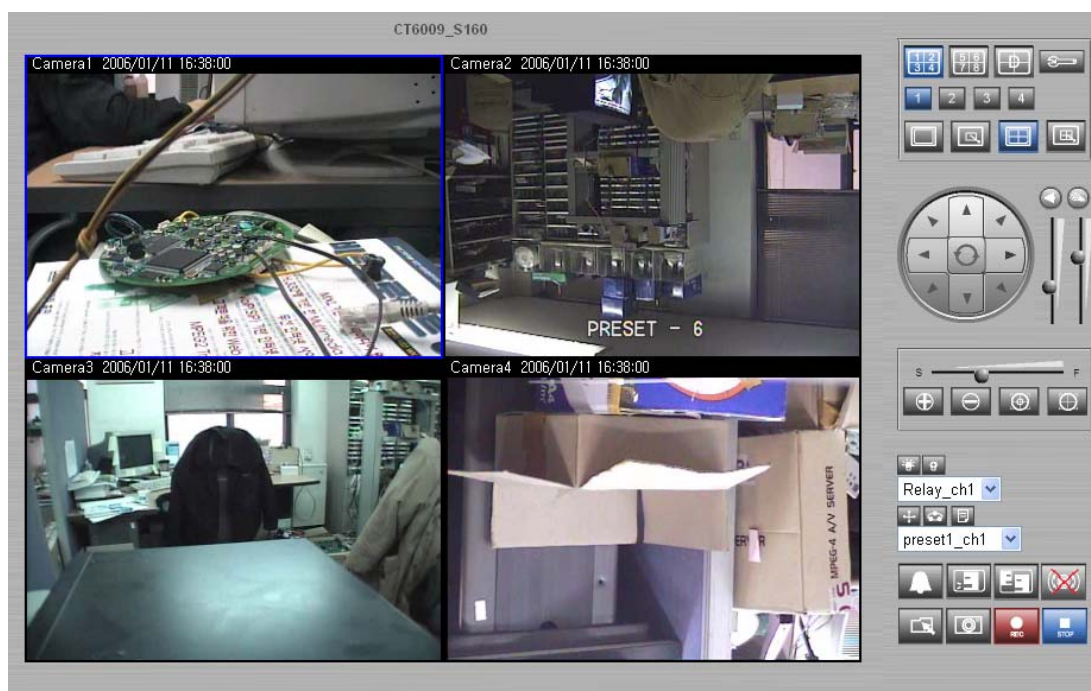
User ID	User Password	Rights
guest	guest	Monitor only
ptz	ptz	Monitor, Control of P/T/Z, Control of Relay
audio	audio	Monitor, Hearing
laudio	laudio	Monitor, Bi-directional Audio
PCAudio	PCAudio	Monitor, P/T/Z, Relay Control, Hearing (1 way Audio)
root	root	All Function

- 6) Above [Table 2-1] is the value basically set in S-160. Change the User Information in '[General Setting](#)' of '[4. Expert Setting](#)' after installation of S-160.
- 7) Click (1) after input ID:root, Password:root in [2-5].
- 8) Message Window [2-6] appear soon, click 'Yes'. If click 'No', Web Viewer doesn't work. .



Pic. 2—6 ActiveX Download

- 9) Upon installation, Web Viewer [Pic. 2-7] appears and image of Camera is to be seen.



Pic. 2—7 Web Viewer

- 10) After checking the video feed [Pic 2-7], go to the next Chapter '[3. Basic Setting](#)'
- 11) Refer to '[5. Basic Use](#)' to see the details how to use Web Viewer.

3. Basic Setting

3. Basic Setting

3.1 Check Network and Installation Type

This Chapter is for basic setting of S-160. To install Hardware of S-160, basic understanding of Network is required. [Please refer to Chapter 6 in case knowledge of Network Environment is required.](#)

There are two ways to install Hardware,

1. **install S-160 without IP sharing Device** under Cable Modem or Leased Line,
2. **install S-160 under IP sharing Device**, which is required under PPPoE environment, and even under Leased Line or Cable Modem. The default IP Address of S-160 is preset to 192.168.1.8 and Subnet Mask to 255.255.255.0 and Gateway to 192.168.1.1 in ex-factory condition. This explanation is based upon default value of ex-factory.

Caution 1 : Check Video before installation, on '[2. Installation and Video Check](#)'.

Caution 2 : In case using IP sharing Device, only Global IP is available.

Caution 3: S-160 does not support PPPoE. IP Sharing Device is required to connect to S-160 under PPPoE.

Installation without IP sharing device

- > For static IP, refer to '[Static IP Setup](#)'.
- > For dynamic IP, refer to '[Dynamic IP Setup](#)'.

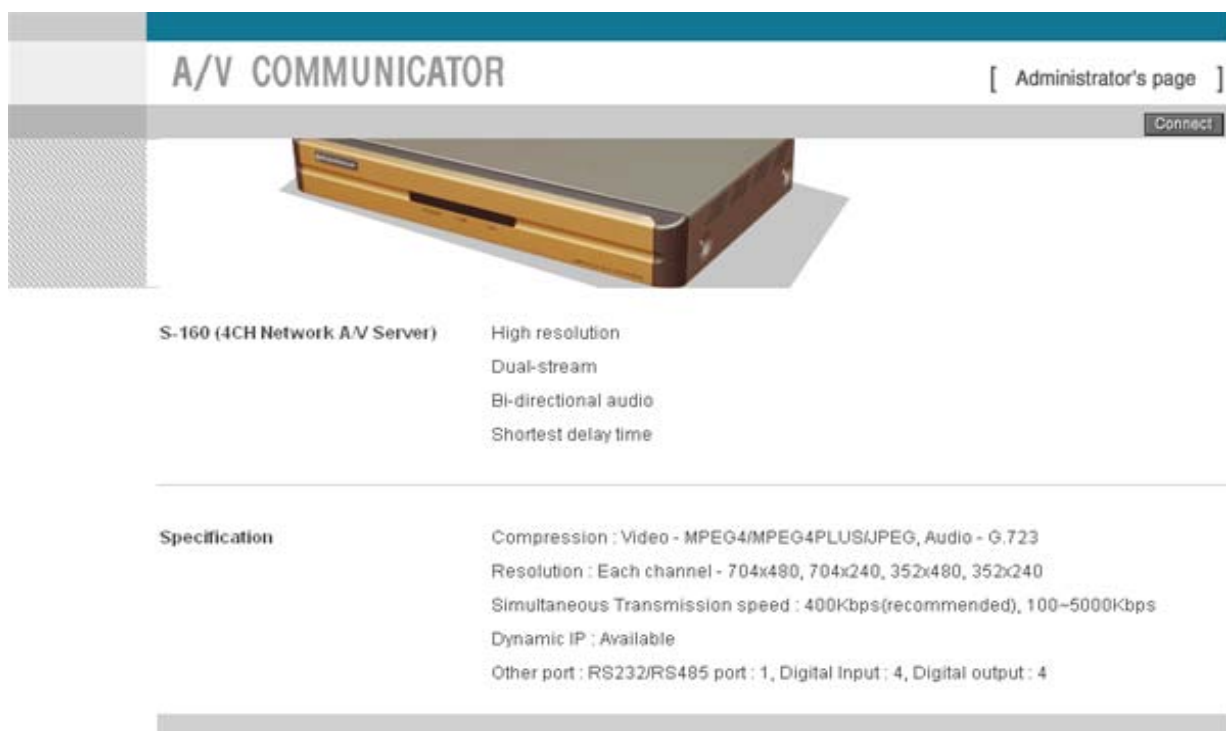
Installation with IP sharing device

- > Should set up with Static IP. Refer to '[Installation with IP Sharing Device](#)'.

3.2 Installation without IP sharing device (Router)

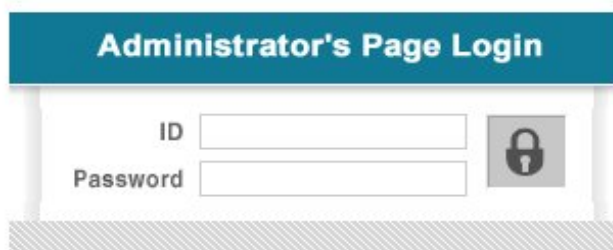
3.2.1 Static IP Setup

- 1) After checking Video in '[Video Check](#)', go to the next step.
- 2) Connect S-160 to PC with LAN Cable (Cross Cable).
- 3) **Cable connection and Network Setup should be same as shown in '[1. Installation and Video Check](#)'.**
- 4) Run Web Browser and input 192.168.1.8 in URL and click 'Enter', then [Pic. 3-1] will appear.



Pic. 3—1 Main Page of S-160


- 5) Click 'Administrator's Page' of [Pic. 3-1], then Browser shows [Pic. 3-2] Log-in Page.



Pic. 3—2 Administrator Page Log-in

- 6) Put 'admin' in ID and Password line, click 'Login', then [Pic.3-3] 'Administrator's Page' will be shown. (ID, Password of S-160 is preset as admin/admin in Administrator's Page. Change Administrator's ID and Password in General Setting of [4. Expert Setting](#))

Administrator's Page



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- [+General Setting](#)
- [+Network Setting](#)
- [+Video & Audio Setting](#)
- [+Color Setting](#)
- [+Alarm Setting](#)
- [+DIO Setting](#)
- [+RS232C Setting](#)
- [+Preset Setting](#)
- [+HomePage Update](#)
- [+Firmware Update](#)

General Setting

Server Title

+ Title Save

Change Administrator

+ Admin Id

+ Admin Password

+ Password Confirm

Save

Add User

+ User Id

+ User Password

+ Password Confirm

+ Authorization View Only

Save

List Users

List Users

Direct Cam View

☐ Skip Login

+ Connect ID: ptz1

Save

Time Setting

☒ Automatic Setting

+ Set Time Zone Asia/Seoul(korea) Save

☐ User Setting

Year: 2004

Month: 11

Day: 26

Hour: 15

Minute: 55

Save

+ Current Date & Time

Display

Plugin Download

☒ Internal Plugin

☐ External Plugin

+ Plugin Server Address cryptotelecom.net Save


Language

+ Select Language ENGLISH Save

Pic. 3—3 Administrator's Page

- 7) Click "Network Setting" in left menu on [Pic..3-3], [Pic. 3-4] appears.
- 8) Click 'Static IP Address' in 'IP Setting' of [Pic. 3-4], and input IP Address, Subnet Mask, Default Gateway according to Network environment to connected S-160.
- 9) For setting of 'DNS Server', input DNS Address to fit with Network Environment to set. (Default Address of S-160 is DNS Address of 'Dacom', 'Cryptotelecom'). Use DNS value normally set in PC.
- 10) DNS Address should be necessarily input.
- 11) In case of installation without IP sharing device under Static IP, tick on 'Enable' of 'Direct Connect'. The 'Direct Connect' option makes direct connection to IP set on Video connection through Web Viewer. **(But not tick 'Enable' in case of installation under IP Sharing Device.)**
- 12) Click 'Save' Button of [3-4] to save setting value.

Administrator's Page



CryptoTelecom

- +General Setting
- +Network Setting
- +Video & Audio Setting
- +Color Setting
- +Alarm Setting
- +DIO Setting
- +RS232C Setting
- +Preset Setting
- +HomePage Update
- +Firmware Update

Network Setting

IP Setting

☐ Dynamic IP Address
 ☒ Static IP Address

+IP Address

192.168.1.8

+Subnet Mask

255.255.255.0

+Default Gateway

192.168.1.1

+Direct Connect

☐ Enable

Save

DNS Server Setting

+First DNS Server

164.124.101.2

+Second DNS Server

211.176.62.86

Save

IP Server Setting

+IP Server Address

cryptotelecom.net

Save

MAC Address

+MAC Address

00069700187A

Port Setting

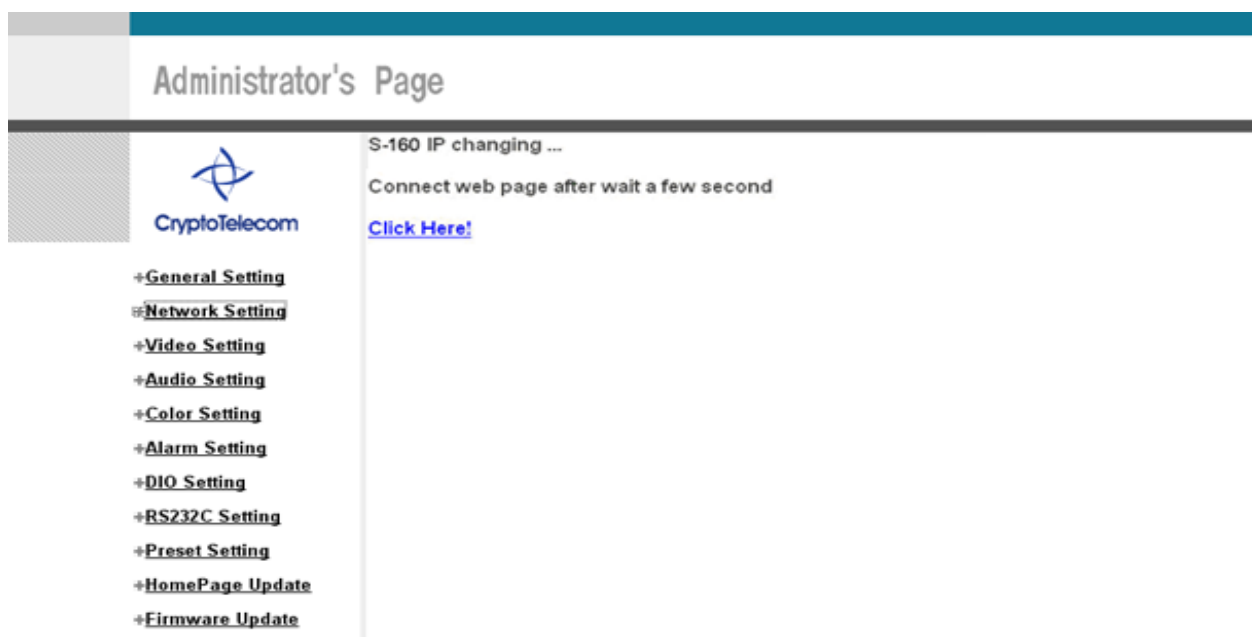
☒ Default Port
 ☐ User Port

+Channel	+User Login Port	+Stream Server Port	+Web Server Port
1	9000	9001	80
+Audio	+Audio Port	+Interactive Audio Port	
	9002	9003	

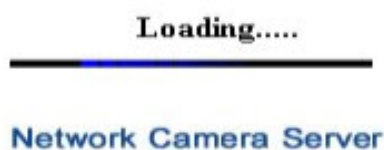
Save

Pic. 3—4 Network Setting

- 13) Click 'Click Here' upon appearing of IP Change Window of [Pic. 3-5].
- 14) IP Change loading Page appears as [3-6], the Main Page of changed address is connected. (May not find the main page of changed address under Cross Cable connection, but IP been changed.)



Pic 3—5 IP Change



Pic. 3—6 IP Change loading Page

- 15) Remove LAN Cable (Cross Cable) connected between S-160 and PC.
- 16) Connect S-160 to Network with LAN Cable (Straight Cable).
- 17) Connect PC to Network with LAN Cable (Straight Cable)..
- 18) Set up IP Address, Subnet Mask and Gate way of PC according to Network environment.
- 19) Check
 - ✓ Run Web Browser on PC, input IP address set in S-160 onto URL and click 'Enter',
 - ✓ Check if IP Setting is correct or not, referring to '[Video Check](#)'
 - ✓ In case Video is seen, S-160 has been correctly set up.
 - ✓ In case Video is not seen, check whether there may be confliction of IP in Network, and re-check the set value of Network environment of S-160, and Network environment of User's PC.

3.2.2 Dynamic IP Setup

- ✓ Do not set up Dynamic IP in S-160 except direct connection of Cable Modem supporting Dynamic IP with S-160.

- ✓ Reset, in case IP has not been allocated to S-160 in Dynamic IP Setting, to go to Initial Value and try again.

- 1) After checking Video in '[Video Check](#)', then go to the next step.
- 2) Connect S-160 and LAN Cable (Cross Cable)
- 3) **Cable Connection and Network Setting should be done same as per '[1. Installation and Video Check](#)'.**
- 4) Go to Network Setting Page of Administrator's Page as per 4), 5), 6), 7) of '[Static IP Setup](#)'.

Pic. 3—7 Network Setting

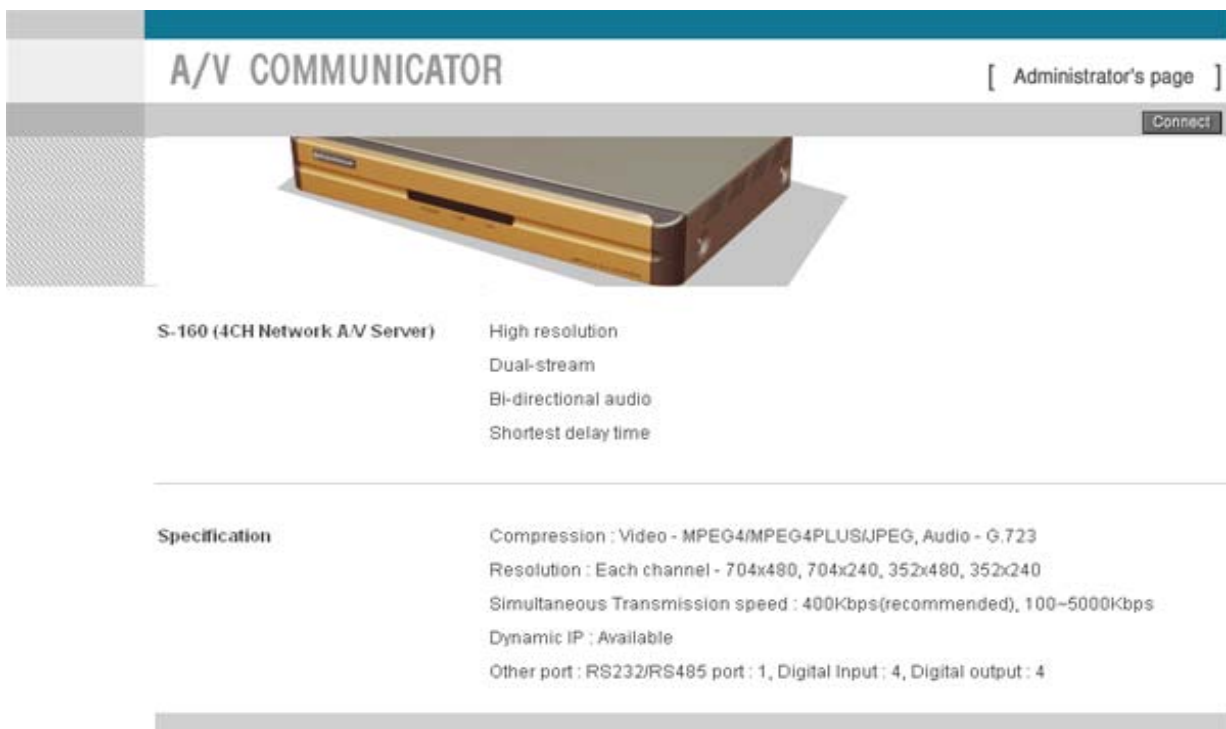
- 5) Click on 'Dynamic IP Address' in 'IP Setting'.
- 6) Click 'Save' Button.
- 7) Upon completion of setting, close the Web Page and find IP of S-160 in 'IP Utility' program provided with Proprietary Viewer (see '[5. Basic Use](#)')
- 8) If IP found, S-160 has been given IP. But in case IP is not found, do re-set of [2-1] to go to initial value because it has not been given IP, then re-start IP Setting. Once S-160 is given IP, remove LAN

- Cable (Cross Cable) connected between S-160 and PC.
- 9) Connect S-160 to Network with LAN Cable (Straight Cable).
 - 10) Connect PC to Network with LAN Cable (Straight Cable).
 - 11) Set IP address of PC, Subnet Mask and Gateway properly according to Network Environment.
 - 12) Check

After registration of S-160 in PIMA Server (refer to '[Use of PIMA Server](#)' of '[5. Basic Use](#)', connect to S-160 by Domain Name (Server Name) allocated to S-160.

For example, run Web Browser and input Domain Name allocated to S-160 in URL. In <http://s-160.cryptotelecom.net>, 'S-160' is to be Name of Server registered in PIMA Server by user.

If the initial page is shown as [Pic. 3-8], check Video of S-160 referring to '[1. Video Check](#)'. If Video is seen, set up is properly done.



Pic. 3—8 Initial Page of S-160

3.3 Installation with IP Sharing Device (Router)

- 1) After checking Video in '[1. Installation and Video Check](#)', then go to the next step.
- 2) Connect S-160 and PC with LAN Cable (Cross Cable).
- 3) **Cable Connection and Network Setting should be done same as per '[1. Installation and Video Check](#)'.**
- 4) Go to Network Setting Page of Administrator's Page as per 4), 5), 6), 7) of '[Static IP Setup](#)'.
- 5) Click 'Static IP Address' in 'IP Setting' of [3-9], and input IP Address, Subnet Mask, Default Gateway according to Network environment to connected S-160 to.

- 6) For setting of 'DNS Server', input DNS Address to fit with Network Environment to set.
(Default Address of S-160 is DNS Address of 'KTF', 'Hanaro Communication'). Use
DNS value normally set in PC.
- 7) DNS Address should be input surely. In case S-160 is installed under IP Sharing Device, input local IP
of Router in 2nd DNS Server Address.
- 8) In case of installation without IP sharing device under Static IP, tick on 'Enable' of 'Direct Connect'.
The 'Direct Connect' option makes direct connection to IP set on
Video connection through Web Viewer. (But not tick 'Enable' in case of installation under IP Sharing
Device.)
- 9) Click 'Save' Button of [3-9] to save the set value.

Administrator's Page

Network Setting

IP Setting

☐ Dynamic IP Address

☒ Static IP Address

+IP Address: 192.168.1.8

+Subnet Mask: 255.255.255.0

+Default Gateway: 192.168.1.1

+Direct Connect: ☐ Enable

Save

DNS Server Setting

+First DNS Server: 164.124.101.2

+Second DNS Server: 211.176.62.86

Save

IP Server Setting

+IP Server Address: cryptotelecom.net

Save

MAC Address

+MAC Address: 00069700187A

Port Setting

☒ Default Port

☐ User Port

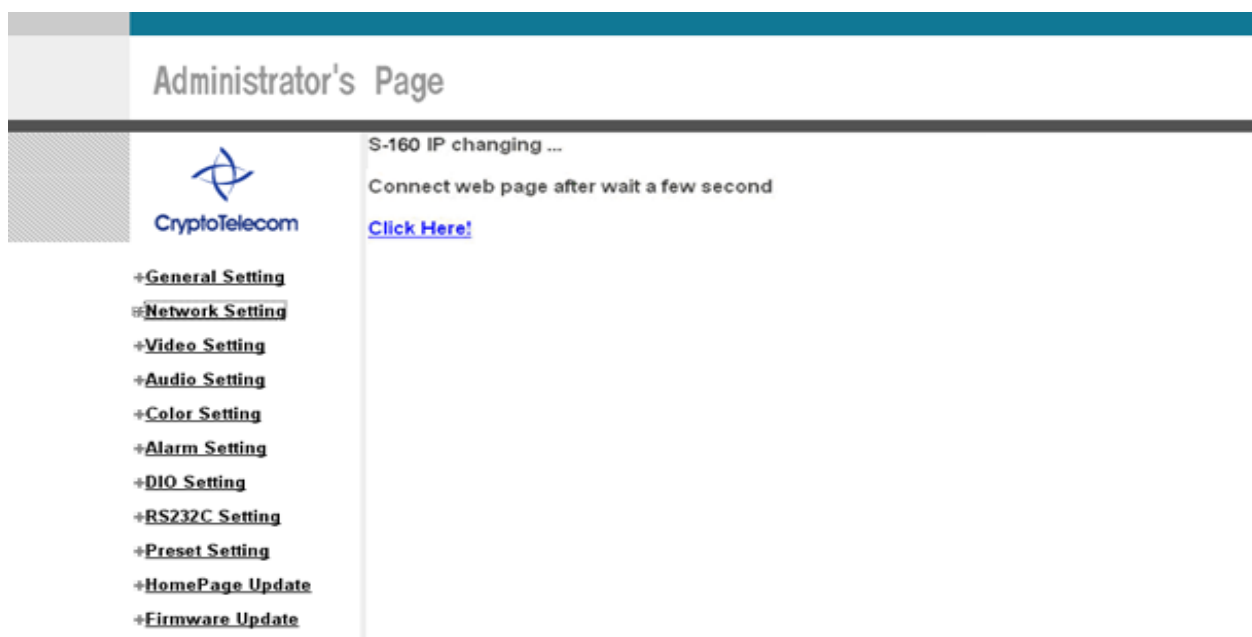
+Channel	+User Login Port	+Stream Server Port	+Web Server Port
1	9000	9001	80

+Audio	+Audio Port	+Interactive Audio Port
	9002	9003

Save

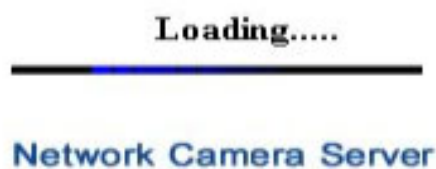
Pic. 3—9 Network Setting

- 10) Click 'Click Here' upon appearing of IP Change Window of [Pic. 3-10].
- 11) IP Change loading Page appears as [3-11], the Main Page of changed address is connected. (may
not find the main page of changed address under Cross Cable connection, but IP has been changed.)



Pic. 3—10 IP Change

- 12) It is connected to IP newly set up, in 20 seconds after window of [3-11] appears.
- 13) Check Video of S-160 referring to '[1. Video Check](#)' as soon as it is connected to IP newly set up.
- 14) Go to Network Setting Page of Administrator's Page as per 4), 5), 6), 7) of '[Static IP Setup](#)'.



Pic. 3—11 IP Change loading Page

Port Setting

☒ Default Port
☐ User Port

+Channel	+User Login Port	+Stream Server Port	+Web Server Port
1	<input type="text" value="9000"/>	<input type="text" value="9001"/>	<input type="text" value="80"/>
+Audio	+Audio Port <input type="text" value="9002"/>	+Interactive Audio Port <input type="text" value="9003"/>	

Pic. 3—12 Port Setting

- 15) Set Port in Port Setting Page of [Pic.3-12]. It is required to set each different Port for many S-160

Servers under 1 Router.

16) Click 'Save' Button to save set value.

17) Remove LAN Cable (Cross Cable) connected between S-160 and PC.

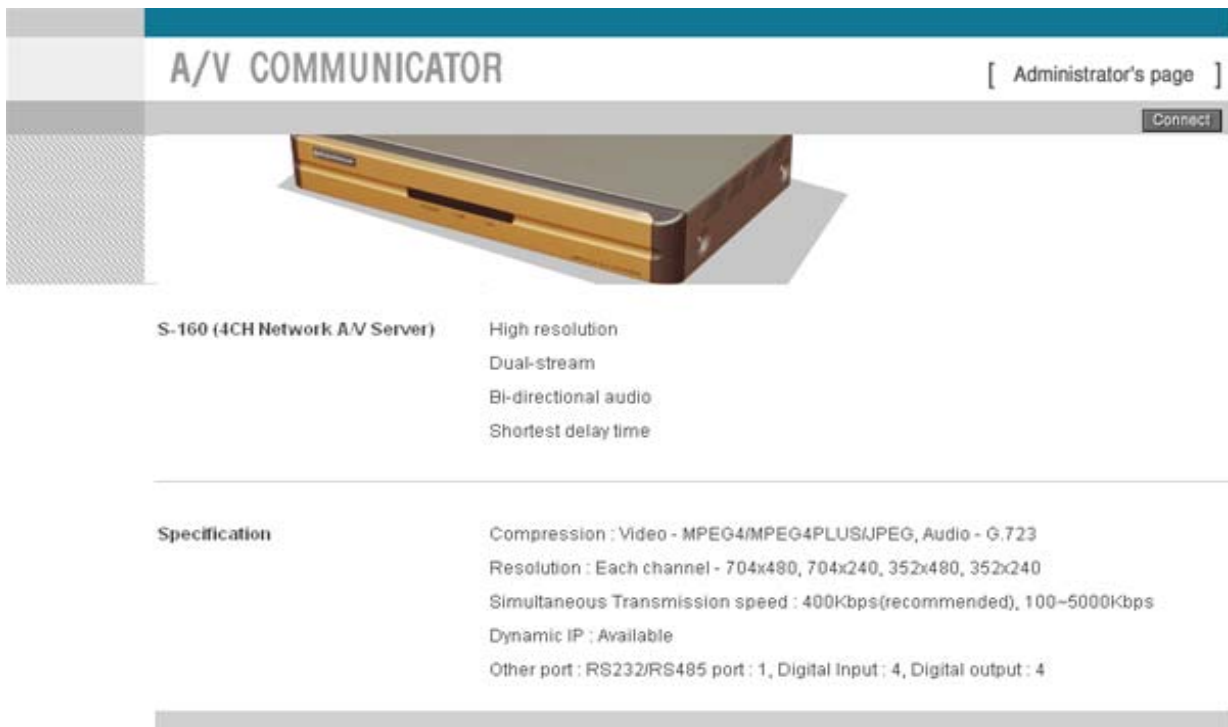
18) Connect S-160 to Network with LAN Cable (Straight Cable).

19) Connect PC to Network with LAN Cable (Straight Cable).

20) Port-Forward the port designated to use S-160, in IP Sharing Device. **Refer to manual of IP Sharing Device for details.**

21) **Check 1** (local check)

Run Web Browser and input IP address of S-160 in URL and click 'Enter'. If you changed Web Server Port, you must input '[http://IP Address:Port Number](#)'. For example, If you set IP address of S-160 to 192.168.0.100 and changed Web Server port to 81, you must input [Http://192.168.1.100:81](#).



Pic. 3—13 Main Page of S-160

After [Pic.3-13] appears, check Video of S-160 referring to '[1. Video Check](#)'.

22) **Check 2** (Check from outside)

After registration of S-160 in PIMA Server (refer to "[Use of PIMA Server](#)" of "[5. Basic Use](#)", connect to S-160 by Domain Name (Server Name) allocated to S-151.

For example, run Web Browser and input Domain Name allocated to S-160 in URL. In [http://S-151.cryptotelecom.net](#), 'S-160' is to be Name of Server registered in PIMA Server by user.

If the initial page is shown, check Video of S-160 referring to '[1. Video Check](#)'. If Video is seen, set up is properly done.

3.4 Cautions

If the firewall is used for security purpose, S-160 may not work properly. In this case, open the port of S-160, then it will work properly. The port being used by S-160 can be checked on 'Port Setting' of 'Network Setting' of 'Administrator's Page'.

Port of S-160 on ex-factory is set default as follows ;

- Web Connection Port : Port 80 TCP
- Authentication and Control Port: Port 9000 TCP
- Video Streaming Port : Port 9001 TCP
- Audio one-way Port : Port 9002 TCP
- Audio two-way Port : Port 9003 TCP


In setting user port, do not use 1504, 1508, which port is used in S-160 itself.

4. Expert Setting

4. Expert Setting


After registration of S-160 in PIMA Server (refer to 'Use of PIMA Server' of "[5. Basic Use](#)", connect to S-160 by Domain Name (Server Name) allocated to S-160. (For example, run Web Browser and input Domain Name allocated to S-160 in URL. In <http://s-160.cryptotelecom.net>, 'S-160' is to be Name of Server registered in PIMA Server by user)

Click 'Administrator's Page' on Initial Page of S-160, login Page of [Pic.4-1] appears. Put 'admin' in ID and Password line, click 'Login', then [Pic.4-2] 'Administrator's Page' will be shown. (ID, Password of S-160 is preset as admin/admin in Administrator's Page. Change ID and Password of Administrator in General Setting of '[4. Expert Setting](#)'.)

The image shows a login form titled "Administrator's Page Login" in a blue header. Below the header, there are two input fields: "ID" and "Password". To the right of the "Password" field is a grey button with a white padlock icon. The form is set against a light grey background with a subtle shadow effect.

Pic. 4—1 Administrator's Page Login

Administrator's Page



+General Setting

+Network Setting

+Video & Audio Setting

+Color Setting

+Alarm Setting

+DIO Setting

+RS232C Setting

+Preset Setting

+HomePage Update

+Firmware Update

General Setting

Server Title

+ Title Seoul Save

Change Administrator

+ Admin Id + Admin Password + Password Confirm Save

Add User

+ User Id + User Password + Password Confirm + Authorization View Only Save

List Users

List Users

Direct Cam View

☐ Skip Login + Connect ID: ptz1 Save

Time Setting

Automatic Setting

+ Set Time Zone Asia/Seoul(korea) Save

User Setting

Year: 2004 Month: 11 Day: 26 Hour: 15 Minute: 55 Save

+ Current Date & Time Display

Plugin Download

☒ Internal Plugin
 ☐ External Plugin + Plugin Server Address cryptotelecom.net Save

Language

+ Select Language ENGLISH Save

Pic. 4—2 Administrator's Page

4.1 General Setting

Administrator's Page

General Setting

- Server Title**
 - + Title: Seoul [Save]
- Change Administrator**
 - + Admin Id: [Save]
 - + Admin Password: [Save]
 - + Password Confirm: [Save]
- Add User**
 - + User Id: [Save]
 - + User Password: [Save]
 - + Password Confirm: [Save]
 - + Authorization: View Only [Save]
- List Users** [List Users]
- Direct Cam View**
 - ☐ Skip Login
 - + Connect ID: ptz1 [Save]
- Time Setting**
 - ☒ Automatic Setting
 - + Set Time Zone: Asia/Seoul(korea) [Save]
 - ☐ User Setting
 - Year: 2004 Month: 11 Day: 26 Hour: 15 Minute: 55 [Save]
 - + Current Date & Time [Display]
- Plugin Download**
 - ☒ Internal Plugin
 - ☐ External Plugin
 - + Plugin Server Address: cryptotelecom.net [Save]
- Language**
 - + Select Language: ENGLISH [Save]

Pic. 4—3 General Setting

4.1.1 Title Setting

Server Title

+ Title: S-160 [Save]

Pic. 4—4 Title Setting

Server title is to be English without space.

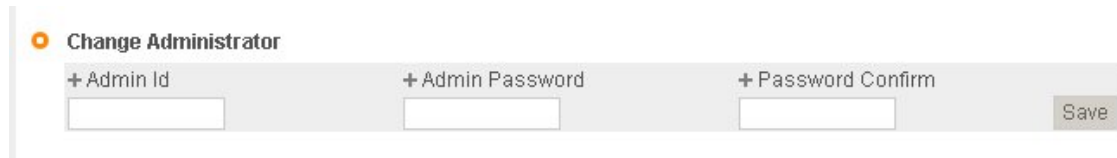
Click 'Save' Button to save title after input name.

4.1.2 Administrator's ID and Password Change

※ **Cautions : Change Administrator's ID and Password and do not disclose the information to others.**

Administrator's ID and Password should be English, within 20 characters, without space.

Click 'Save' Button to save the changed value after change Administrator's ID and Password.



Pic. 4—5 Administrator's ID and Password Change

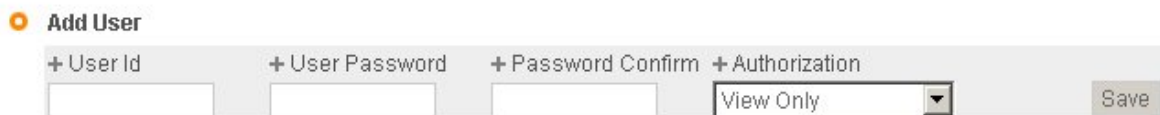
Remember Administrator's ID and Password. In case of forgetting Administrator's ID and Password, click 'reset' button for returning to initial value, and change Administrator's ID and Password.

4.1.3 User Registration

This is to register an account of user who monitor and control Video of S-160.

Administrator's ID and Password should be English, within 20 characters, without space. Allow the authority to users and click 'Save' button. A maximum user to allow registration is 100 persons.

- View Only : Monitoring only.
- PTZ+Control : Monitoring, Control of P/T/Z of Camera and Relay.
- Audio : Monitoring, and hearing Audio of Server.
- Interactive Audio : : Monitoring, Two-way Audio Communication with Camera Server
- PTZ+Control+Audio : Monitoring, Control of P/T/Z of Camera and Relay, Hearing Audio of Camera Server.
- All : Monitoring, Control of Camera P/T/Z and Relay, two-way Audio Communication with Camera Server, (Preset available)



Pic. 4—6 User Registration

4.1.4 User List and Delete



Pic. 4—7 User List

User list is available on clicking 'List Users' on [Pic.4-7], to check list and delete user ID in [Pic.4-8].

User ID 'guest', 'ptz', 'audio', 'laudio', 'PCAudio', 'root' has be pre-registered as basic user

ID on ex-factory.



Pic. 4—8 User List

4.1.5 Skip Login (Automatic Monitoring)



Pic. 4—9 Skip Login

Check on 'Skip Login' of [Pic.4-9], and click 'Connect ID' and save the value, then Web Viewer will be appeared automatically and Video of Camera can be seen upon connection to Home Page of S-160. Save 'Connect ID' according to user authority. If you don't check on 'Skip Login', it is available to connect to S-160 Home Page but you can not see the Video feed from the camera. In this case, input user ID and Password for connection to see the Video feed from the Camera.

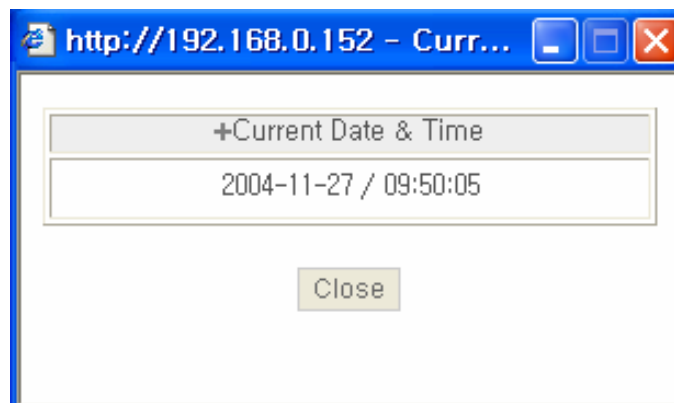
4.1.6 Time Zone Setting

This is to set Time zone of location where S-160 is to be installed, to set up local time in case of monitoring from different time zone area. Select one of time zone in 'Set Time Zone' and save.



Pic. 4—10 Time Zone

Click 'Display' in [4-10] to see current time set in S-160.



Pic. 4—11 Current Time View

In case S-160 does not keep correct time, click 'Update' Button to get new time information from set time zone.

4.1.7 Set Download Route of Plug-in Type ActiveX

This is to set how to download Active X of Web Viewer, locally or from outer Server designated. In case setting as local download, it has a merit to use in private network without Internet. In case of setting as download from outside, it has a merit to download the updated Active X of Web Viewer automatically.



Pic. 4—12 Plug-in Download Route

4.1.8 Select Language

This is to select language to be displayed in all Web Pages such as Administrator's Page, Web Viewer and Main Page of S-160.



Pic. 4—13 Select Language

It supports both English and Japanese. Click 'Save' Button to save the set value after select the Language. Input ID and Password to connect Administrator's Page, and go to 'Home Page Update'-'>'Default Home Page Setting'-'>'Default', and change the main Page and Login Page of S-160 to the selected language.


4.2 Network Setting

This is to set Network to use S-160. Set Network to fit user's network environment in

'[3. Basic Setting](#)'. Change Network information to fit environment for S-160 to be installed in.

4.3 Video & Audio Setting

4.3.1 Video Setting



+General Setting

+Network Setting

+Video Setting

+Audio Setting

+Color Setting

+Alarm Setting

+DIO Setting

+RS232C Setting

+Preset Setting

+HomePage Update

+Firmware Update

Video Setting

Video Setting

+Video Mode

NTSC

+JPEG Compression

352x240

+ Available Frame

0

fps

+Total: CIF(352x240)

240fps

+Camera	+CH	+Resolution	+Frame Rate	+Bit Rate	+Key Frame
1	<input checked="" type="checkbox"/> CH1	704x240	15	<input checked="" type="radio"/> VBR Quality: Normal 700 Kbps	30
	<input checked="" type="checkbox"/> CH5	352x240	15	<input checked="" type="radio"/> VBR Quality: Normal 700 Kbps	30
2	<input checked="" type="checkbox"/> CH2	704x240	15	<input checked="" type="radio"/> VBR Quality: Normal 700 Kbps	30
	<input checked="" type="checkbox"/> CH6	352x240	15	<input checked="" type="radio"/> VBR Quality: Normal 700 Kbps	30
3	<input checked="" type="checkbox"/> CH3	704x240	15	<input checked="" type="radio"/> VBR Quality: Normal 700 Kbps	30
	<input checked="" type="checkbox"/> CH7	352x240	15	<input checked="" type="radio"/> VBR Quality: Normal 700 Kbps	30
4	<input checked="" type="checkbox"/> CH4	704x240	15	<input checked="" type="radio"/> VBR Quality: Normal 700 Kbps	30
	<input checked="" type="checkbox"/> CH8	352x240	15	<input checked="" type="radio"/> VBR Quality: Normal 700 Kbps	30
Quad Display	<input checked="" type="checkbox"/> CH0	704x480	15	<input checked="" type="radio"/> VBR Quality: Normal 700 Kbps	30

Default

+VBR:Variable Bit Rate +CBR:Constant Bit Rate

Save

Title Setting

+Camera

1

2

3

4

+Title

Camera1

Camera2

Camera3

Camera4

Pic. 4—14 Video Setting

Select and tick on the Channel to use, input Video format (NTSC or PAL), Resolution, Bit rate, Frame rate and Key frame.

Video Setting

+Video Mode: NTSC

+JPEG Compression: 352x240

+ Available Frame: 0 fps

+Total CIF (352x240) 240fps

+Camera	+CH	+Resolution	+Frame Rate	+Bit Rate	+Key Frame
1	<input checked="" type="checkbox"/> CH1	704x240	15	<input checked="" type="radio"/> VBR Quality: Normal <input type="radio"/> CBR 700 Kbps	30
	<input checked="" type="checkbox"/> CH5	352x240	15	<input checked="" type="radio"/> VBR Quality: Normal <input type="radio"/> CBR 700 Kbps	30
2	<input checked="" type="checkbox"/> CH2	704x240	15	<input checked="" type="radio"/> VBR Quality: Normal <input type="radio"/> CBR 700 Kbps	30
	<input checked="" type="checkbox"/> CH6	352x240	15	<input checked="" type="radio"/> VBR Quality: Normal <input type="radio"/> CBR 700 Kbps	30
3	<input checked="" type="checkbox"/> CH3	704x240	15	<input checked="" type="radio"/> VBR Quality: Normal <input type="radio"/> CBR 700 Kbps	30
	<input checked="" type="checkbox"/> CH7	352x240	15	<input checked="" type="radio"/> VBR Quality: Normal <input type="radio"/> CBR 700 Kbps	30
4	<input checked="" type="checkbox"/> CH4	704x240	15	<input checked="" type="radio"/> VBR Quality: Normal <input type="radio"/> CBR 700 Kbps	30
	<input checked="" type="checkbox"/> CH8	352x240	15	<input checked="" type="radio"/> VBR Quality: Normal <input type="radio"/> CBR 700 Kbps	30
Quad Display	<input checked="" type="checkbox"/> CH0	704x480	15	<input checked="" type="radio"/> VBR Quality: Normal <input type="radio"/> CBR 700 Kbps	30

Default +VBR: Variable Bit Rate +CBR: Constant Bit Rate Save

Pic. 4—15 Video Setting

- ① Video Mode: Select video mode according to the type of the camera you connect to S-160.
- ② JPEG Compression: This option is used when you view images on cellular or PDA. Two kinds of compression image sizes are available; 352X240 / 176 X 120

※ Dual-Streaming

CryptoTelecom's proprietary encoder chip, CT6009 is embedded into S-160. CT6009 enables users to configure two different video setting from one analog video source.

Dual-streaming function can be used in two ways as follows.

1) Bandwidth: Clients have various network bandwidths to access S-152. If clients use broadband, they never have problem with achieving live images from S-152. But if they don't, live images cannot be viewed smoothly. For smooth video images for clients using not only broadband but also narrowband, S-152 can be configured as two different video setting.

For example, you can set 'dual-streaming' as follows;

For broadband users: 704X480, 30fps, VBR, High Quality

For narrowband users: 352X240, 7fps, CBR, 100kbps

2) Preference between image quality and video smoothness: Video setting will affect the performance of S-152, depending on the usage and the available bandwidth.

- High resolution generates larger files

- Lower compression improves image quality, but generates larger files.
- Black & White uses less bandwidth than color.
- Rotating the image 90 or 270 degrees will lower the maximum frame rate.

Under certain circumstance with fixed bandwidth, some clients prefer image quality to video smoothness and others, the reverse. Dual-streaming can be set as follows;

For better image quality: 704X480, 7fps, VBR, High Quality

For better video smoothness: 320X240, 30fps, CBR, 200kbps

③ Channel Video Setting

- Video Setting: S-160 encodes one video source into two different video channels. That is, user can set up two different encoding configurations such as image size and bit rate on one video source from one analog camera.
 - ※ Maximum Frame Rate: 240fps at CIF(352X240) or 60fps at 4CIF(704X480)
- Available Frame Rate: This shows the remains of possible frame rate that user can set up. If this shows “0”, user cannot set up additional video channel setting.
- CH (Channel): “CH” shows the number of camera displayed on the viewer when user access to S-160 and view the live images.
 - ✎ NO. 1 camera can be accessed through CH 1 or CH 5
 - ✎ NO. 2 camera can be accessed through CH 2 or CH 6
 - ✎ NO. 3 camera can be accessed through CH 3 or CH 7
 - ✎ NO. 4 camera can be accessed through CH 4 or CH 8
- Resolution: Configurable as 704x480, 704x240, 352x480 or 352x240
- Frame Rate: Configurable as 1 ~ 30 fps
- VBR (Variable Bit Rate): The VBR mode will maintain a high, if so defined, image quality regardless of motion or no motion in the image scene. This is often desirable in security and surveillance applications when there is a need for high quality, especially if there is motion in the picture. Since the bit-rate in VBR may vary, even though an average target bit-rate is defined, the network infrastructure (available bandwidth) for such a system needs to have this capacity.



Pic. 4—16 Title Setting

- Users can freely set up the name of each camera channel and the name is shown on web viewer display.

4.3.2 Audio Setting

Administrator's Page

CryptoTelecom

- +General Setting
- +Network Setting
- +Video Setting
- +Audio Setting**
- +Color Setting
- +Alarm Setting
- +DIO Setting
- +RS232C Setting
- +Preset Setting
- +HomePage Update
- +Firmware Update

Audio Setting

+ Channel	+ Setting
1	<input type="radio"/> Disable <input type="radio"/> Audio Enable(Server->Client) <input checked="" type="radio"/> Interactive Audio Enable(Server<->Client)
2	<input type="radio"/> Disable <input type="radio"/> Audio Enable(Server->Client) <input checked="" type="radio"/> Interactive Audio Enable(Server<->Client)
3	<input type="radio"/> Disable <input type="radio"/> Audio Enable(Server->Client) <input checked="" type="radio"/> Interactive Audio Enable(Server<->Client)
4	<input type="radio"/> Disable <input type="radio"/> Audio Enable(Server->Client) <input checked="" type="radio"/> Interactive Audio Enable(Server<->Client)

Save

Audio Volume Setting

+ Channel	1	2	3	4
+ Input(MIC/LINE)	1	1	1	1
+ Output(Speaker)		1		

Save

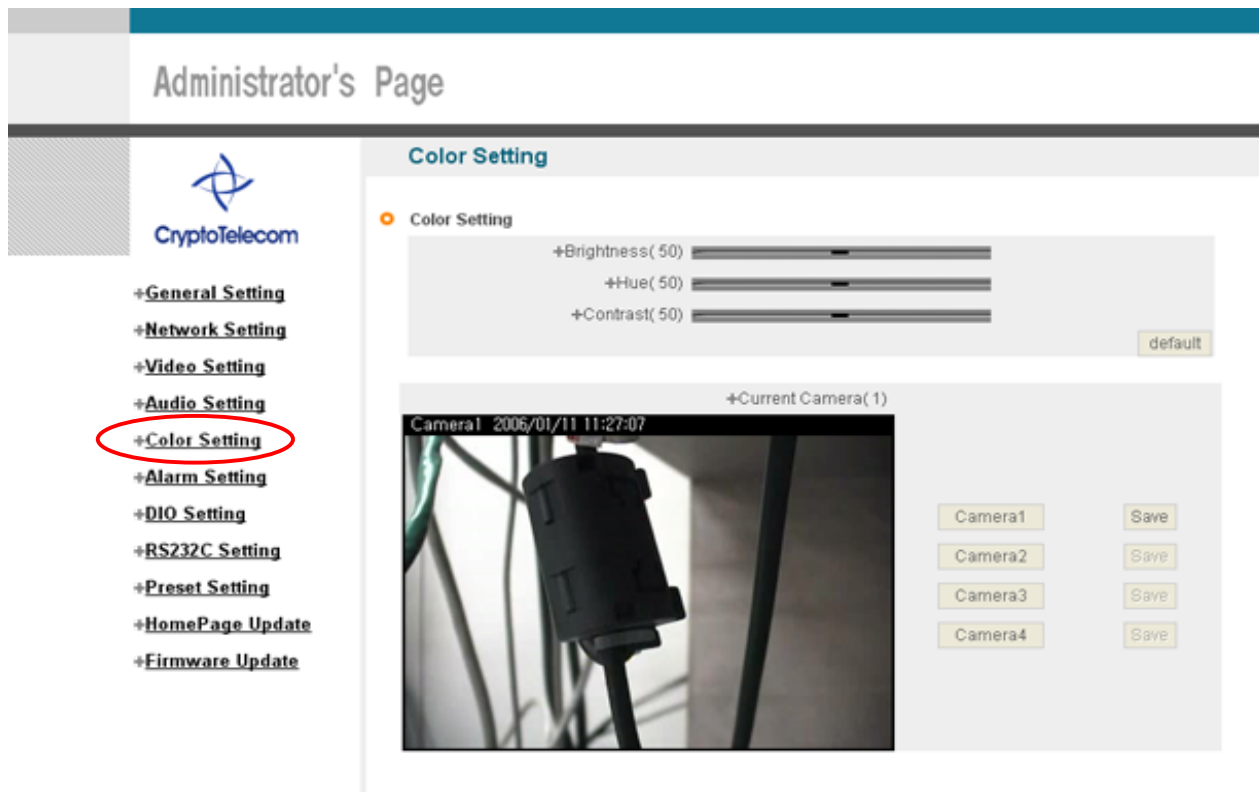
Pic. 4—17 Audio Setting

For one way audio communication, check 'Audio Enable (Server -> Client)' of [Pic.4-17]. And for two way audio communication, check 'Interactive Audio Enable (Server -> Client)'. In case Audio is not used , check 'Disable'. Then click 'Save' to save Set value.

For adjustment of audio volume, select in 'Audio Volume Setting' and save in [Pic.4-17].

4.4 Color Setting

This is to adjust color of channel.



Pic. 4—18 Display Color Setting

Upon adjustment of color on [Pic.4-18], then click 'Save' to save the setting value. In case to return to default value, click 'Default'. Even in this case, it is required to click 'Save' Button for saving the setting value.

4.5 Alarm Setting

Alarm Setting

Alarm Event

+Channel	+Alarm	+Alarm Condition	+Sensitivity(%)
1	<input type="checkbox"/> Enable	<input checked="" type="radio"/> Sensor <input type="radio"/> Motion <input type="radio"/> Sensor & Motion	70
2	<input type="checkbox"/> Enable	<input checked="" type="radio"/> Sensor <input type="radio"/> Motion <input type="radio"/> Sensor & Motion	70
3	<input type="checkbox"/> Enable	<input checked="" type="radio"/> Sensor <input type="radio"/> Motion <input type="radio"/> Sensor & Motion	70
4	<input type="checkbox"/> Enable	<input checked="" type="radio"/> Sensor <input type="radio"/> Motion <input type="radio"/> Sensor & Motion	70

Alarm_Style

☐ Recording

☐ Video Recording

☐ Audio Recording

☐ Alarm Server

☐ FTP

+Server Address: cryptotelecom.net

+Directory: 9100

+User ID:

+Password:

Save Test

Pic. 4—19 Alarm Setting

4.5.1 Alarm Event Setting

To get Alarm Service on S-160 go to 'Administrator's Page' → 'Alarm Setting' and tick 'Enable' in 'Alarm'. Designate condition to drive Event in 'Alarm Condition', such as Sensor Event, Motion detection Event or Sensor + Motion detection Event, If Sensor Event is selected, do Sensor setting in ['4.6 DIO Setting'](#).

- ✓ Sensitivity : To select the sensitivity of motion detection. The larger number represents higher sensitivity to motion.

Upon Event situation after setting on 'Enable' in 'Alarm' of 'Alarm Event', Event is to be transmitted to user's Viewer and inform detection of Event, with flickering on screen and alarm sound. (refer to [5. Basic Use](#)).

To use SMS Service and E-mail transmitting Event to Alarm Server, go 'Alarm Style' -> 'Alarm Server' and input Domain Name of Alarm Server (Default of 'Alarm Server' is **cryptotelecom.net** as ex-

factory condition).

To send the recorded video to FTP Server upon alarm event, go 'Alarm Style'-> 'FTP' and input FTP Server Address, Directory, User IP and Password, FTP Directory (mandatory). Make user's directory in FTP root of User's FTP Server to get recorded files to be transmitted. Click 'Save' Button to save setting value.

In case of setting to send Event to Alarm Server, register S-160 in PIMA Server to use Alarm Server (refer to "[Use of PIMA Server](#)" in '[5. Basic Use](#))

4.5.2 Alarm Style

Click 'Test' of [Pic 4-19], S-160 will work as if Alarm has happened. In case 'Alarm Style ->'Alarm Server' is selected, Event is to be notified to Alarm Server and is to recorded into the recorded file (10 seconds before and 20 seconds after Event), and to be sent to Alarm Server.

In case user FTP Server is selected to use, the recorded file (10 seconds before and 20 seconds after Event) is to be saved in FTP Server. It may take some time for Alarm Message to get to user's Mobile Phone or by E-mail, in some cases. If S-160 has been registered in PIMA Server, it is available to check the details of Event and also change the Alarm Message of E-mail and Mobile Phone to be sent upon Event, in Alarm Server Homepage (.cryptotelecom.net). Refer to '[Use of PIMA Server](#)' in '[5. Basic Use](#)' for details.

4.6 DIO Setting



- +General Setting
- +Network Setting
- +Video Setting
- +Audio Setting
- +Color Setting
- +Alarm Setting
- +DIO Setting**
- +RS232C Setting
- +Preset Setting
- +HomePage Update
- +Firmware Update

DIO Setting

Sensor

Channel	1	2	3	4
Enable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Type	Normal Open	Normal Open	Normal Open	Normal Open
Name	Sensor_ch1	Sensor_ch2	Sensor_ch3	Sensor_ch4

Relay

Channel	Condition	Duration	Name
1	<input type="radio"/> Disable		Relay_ch1
	<input type="radio"/> Remote Control		
	<input type="radio"/> Local Control	Duration 5 sec.	
	<input checked="" type="radio"/> Remote & Local Control	Duration 5 sec.	
2	<input type="radio"/> Disable		Relay_ch2
	<input type="radio"/> Remote Control		
	<input type="radio"/> Local Control	Duration 5 sec.	
	<input checked="" type="radio"/> Remote & Local Control	Duration 5 sec.	
3	<input type="radio"/> Disable		Relay_ch3
	<input type="radio"/> Remote Control		
	<input type="radio"/> Local Control	Duration 5 sec.	
	<input checked="" type="radio"/> Remote & Local Control	Duration 5 sec.	
4	<input type="radio"/> Disable		Relay_ch4
	<input type="radio"/> Remote Control		
	<input type="radio"/> Local Control	Duration 5 sec.	
	<input checked="" type="radio"/> Remote & Local Control	Duration 5 sec.	

Pic. 4—20 DIO Setting

Tick on sensor to use and select type of sensor to use.

- ✓ Sensor Type : designate type of sensor, NC, NO.

Designate name of sensor to use.

4 conditions are selectable for Relay. Relay name is to be input.

- ✓ Disable : not to use Relay
- ✓ Remote Control : to control Relay through Internet using Viewer
- ✓ Local Control : Relay is on during 'Duration' time upon Event on Sensor, and then is to be off.
- ✓ Remote & Local Control : Control Relay through Internet using Viewer. To be ON during 'Duration' time upon event on Sensor, then to be OFF. It's available to designate name on Relay to use.

4.7 RS232C Setting

The screenshot displays the 'Administrator's Page' interface. On the left is a sidebar with the 'CryptoTelecom' logo and a list of settings: General Setting, Network Setting, Video & Audio Setting, Color Setting, Alarm Setting, DIO Setting, **RS232C Setting** (highlighted with a red circle), Preset Setting, HomePage Update, and Firmware Update. The main content area is titled 'RS232C Setting' and contains a 'Select RS232C Model' section. This section includes a dropdown menu with '+ Model' and 'A-120(CryptoCam)' selected, and a 'Serial Interface' section with radio buttons for 'RS485' and 'RS232' (the latter is selected). A 'Save' button is located to the right of the interface options.

Pic. 4—21 RS232C Setting

It is available to select P/T/Z module supported or P/T/Z Integrated Camera. Models of Camera supported by S-160 are:

A-120 (CryptoCam / RS232),

Canon VC-C4R (RS232),

Wonwoo PT-101 (RS485),

Technovision SECUMERA_PRO (RS485),

LG Electronics LPT-A100L(RS485),

ShinTech SD-290(RS485),,

Dongyang Unitec DRX-500,DRX-502A,DOH-240 (RS485), DSC-230Si,DSC-270Si,DOH-240Si (RS485),

Hitron Fastrax2 (RS485).

IZIrobotics A.I Robot TOBO[T-010](RS485)

CNB Technology AN201L(RS485)

Sunkwang SK-D106(RS485)

TYCO/CTNCOM HD-0670(RS485)

SAMSUNG SRX-100B/SPT-5IO/SCC-C4201/SCC-641/SCC-931T (RS485)

PELCO PELCO-D 2400, PELCO-D 9600 (RS485)

Sony EVI-D100/D70

Sysmania ORX-1000

New Models will be added to supporting module in the near future continuously by Firmware Upgrade.
RS232 and RS485 is available for Serial Control. It is available to select the control method. RS 232C BYPASS function is to send user's data through R-232 of S-160. When using this function, Pan/Tilt/Zoom can not be used.

RS232C Bypass Control

- ✓ To use RS232C Bypass, set as 'RS232C BYPASS'.
- ✓ User's data is to be sent through RS232 of S-160.

Example) * Transmit Data : 0x6F,0x70,0x,65,0x6E

BYB9600=1Aopen

* Transmit Data : 0x6F,0x70,0x,65,0x6E

BYB9600=1B6F70656E

Explanation: ->'BYB' : Fixed (not changeable)

->'9600' is baud rate(2400,19200,38400....)

->'=' : fixed (not changeable)

->'1' : type(1: 8bits No parity 1 stop bit

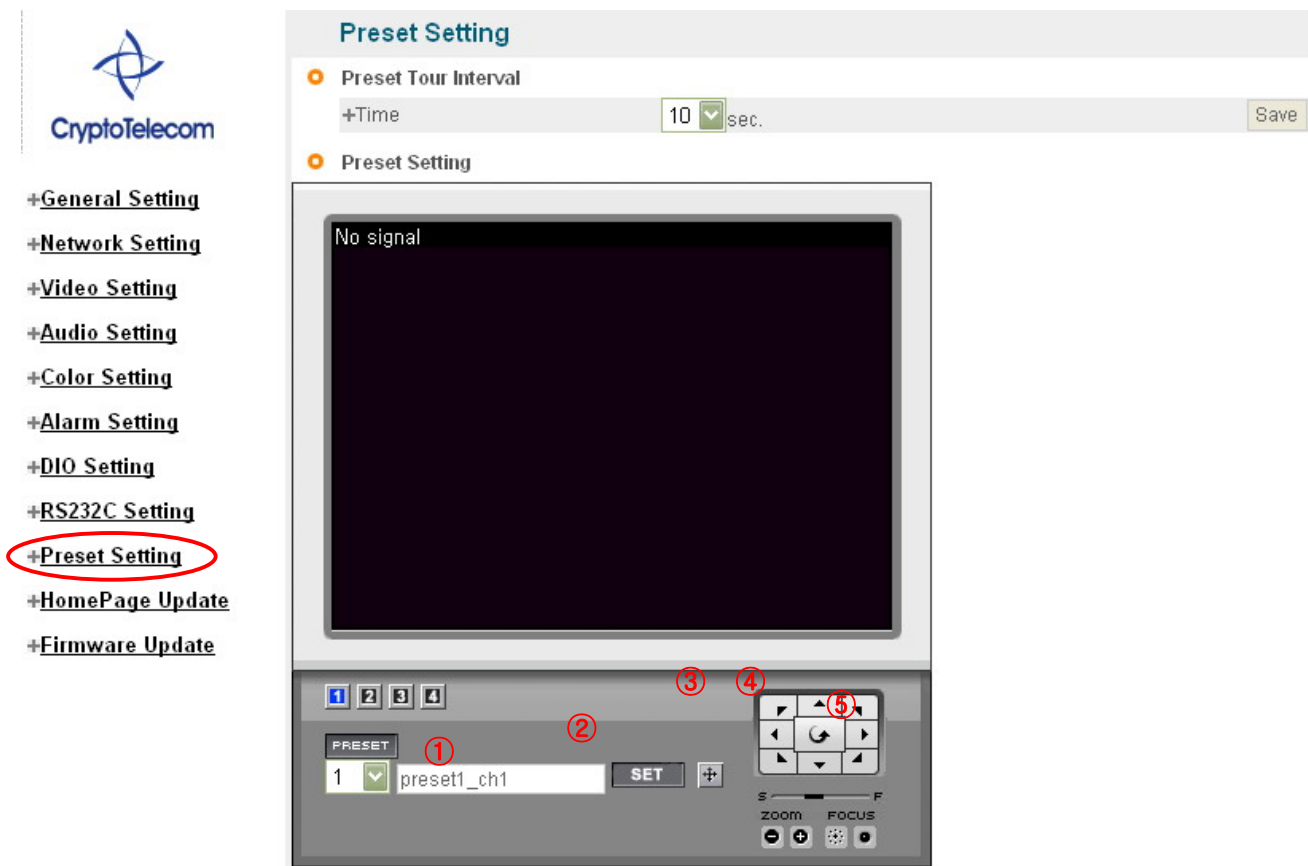
2: 7bits Even parity 1 stop bit

3: 7bits Odd parity 1 stop bit)

->'B' : Type of data to transmit(A:ASCII, B:Binary)

->'6F70656E' : Data to transmit

4.8 Preset Setting



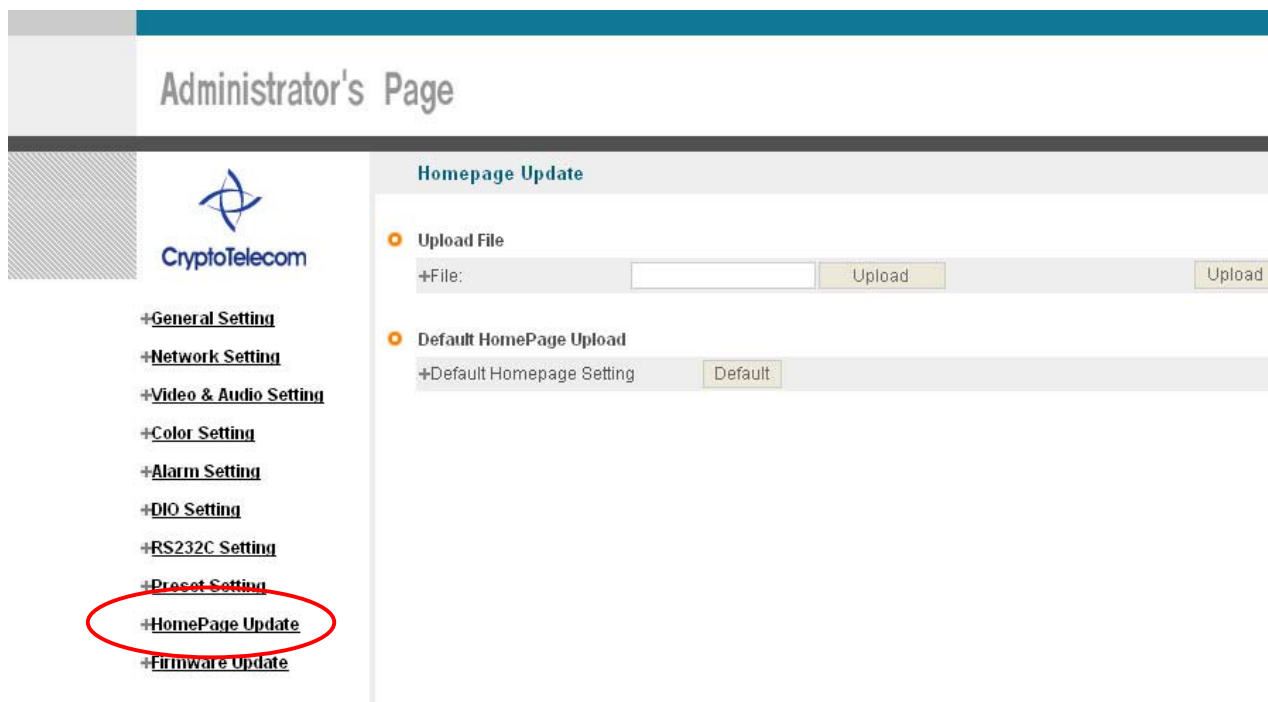
Pic. 4—22 Preset Setting

It is available to pre-set Pan/Tilt/Zoom Cameras. Preset Setting is available up to 20, but may be less than 20 for some model of Camera.

- ✓ (1) : Select Channel ; to select the channel to preset.
- ✓ (2): Preset No. : to select the Preset Number to set up.
- ✓ (3): Preset Name : to input Name of Preset to set up, Preset Name is be 30 character, without space and special characters.
- ✓ (4): Preset SET ; 'SET' button is to set the current coordinate as preset location with name recorded by user. In three seconds after pushing 'SET' button, the Preset coordinate is to be set. Do not move Camera during the time (about three seconds).
- ✓ (5): Preset Move : to move to the selected preset number.
- ✓ (6): Adjustment of Pan/Tilt/Zoom/Speed/Focus : to move to the location to preset by adjusting Pan/Tilt/Zoom/Focus.

Time interval for preset tour mode can be set up, from 1 to 40 seconds.

4.9 Homepage Update



Pic. 4—23 Homepage Update

Homepage Update function is for user to upload the main page of S-160 onto user's Homepage. User's Homepage is composed of 3 files as like index.html, top.htm, main.htm. The file for user to use is main.htm. After making Web Page (main.htm) and save it as file name of main.htm, upload by the function of 'Homepage Update', then main.htm page is to be the 1st main page of S-160.

(Image file is not uploaded in S-160.) User Homepage cannot exceed 300Kbyte.

If user wants to re-make user's homepage into Homepage provided complimentary, click 'Default Home Page Upload'.

4. 10 Firmware Update

4.10.1 Remote Upgrade

In case firmware is upgraded in the near future, Crypto telecom's Upgrade Server ([Http://cryptotelecom.net](http://cryptotelecom.net)) will automatically upgrade Firmware of S-160. Upgrade is only supported via Internet. Information on the latest version of S-160 will be posted in Data Room of Crypto telecom's Homepage. **Remote Upgrade**



The screenshot shows the 'Firmware Update' page. At the top, there is a note: '+ You must system restart the video server after firmware update.' Below this, there are four sections:

- Current Version**: Contains two rows: '+Current Software Version : CT6009_S160_V1.1' and '+Current Hardware Version : CT6009_S160_2800'.
- Remote Update**: Contains a row for '+Update Server Address' with a text input field containing 'cryptotelecom.net' and a 'Save' button. Below it is an 'Update' button.
- Local Update**: Contains a row for '+File:' with a text input field and a '찾아보기...' (Browse...) button. Below it is an 'Update' button.
- System Restart**: Contains a 'Restart' button.

Pic. 4—24 Firmware Update

Address of 'Update Server Address' in [Pic.4-24] is basically set as 'cryptotelecom.net'.

Check 'Current Software Version' in 'Current Version' of [Pic.4-24] and go ahead with update if current version is lower than the latest version. Upon clicking 'Update' button in [Pic.4-24] 'Remote Update', [Pic.4-25] will appear.

The screenshot shows the 'Firmware Remote Update' page. It has a section titled 'Firmware Update' with a note: '+ Wait for the downloading to complete, then click on the Download Button.' Below the note is a 'Download' button.

Pic. 4—25 Firmware Update

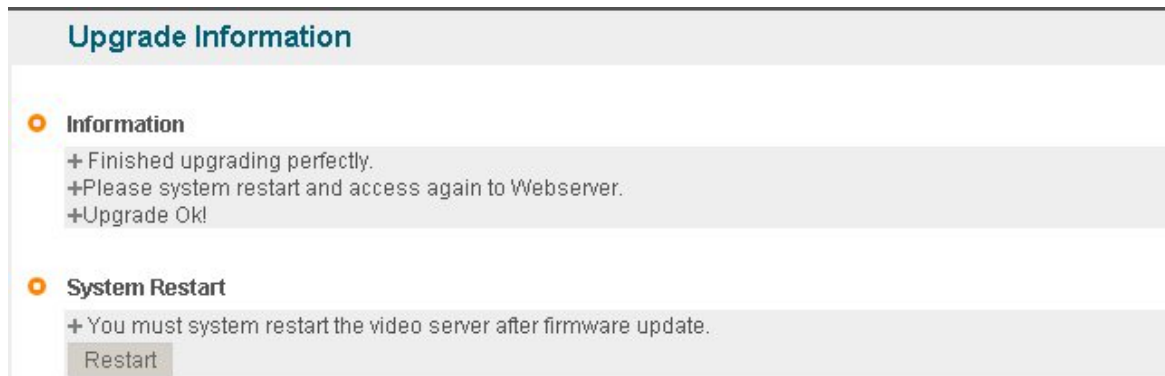
S-160 will be automatically upgraded upon clicking 'Download' button of [Pic.4-25] after connecting to Upgrade Server and checking version.



Pic. 4—26 Firmware Download

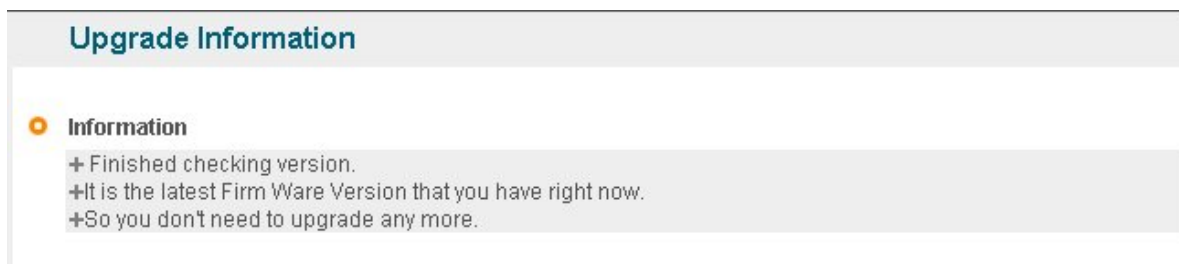
'Downloading' message will be shown until completion of Update as [Pic.4-26] (it may take time according to Network situation). Upon completion of upgrade, there appears message showing upgrade result.

[Pic. 4-27] is the message showing that upgrade has been correctly done. Click 'Restart' in 'System Restart' to restart System of S-160.



Pic. 4—27 Completion of Upgrade

If [Pic. 4-28] is displayed as below, it means that S-160 has been upgraded to the latest Version, there is no need to update any more.



Pic. 4—28 Check of Upgrade Version

If user found [Pic. 4-29], there is an error in connection to Upgrade Server, re-check Internet Connection or re-check DNS Server Address in ['3. Basic Setting'](#) and try to upgrade again. If user keep finding [Pic.4-29] or cannot upgrade, contact head office of CryptoTelecom Co., Ltd. or local agent.



Pic. 4—29 Upgrade Server Connection Error

4.10.2 System Re-booting

This is the function to re-boot Inner Software of S-160. Click 'Restart' on [4-41] 'System Restart' to reboot all inner program of S-160.

5. Basic Use

5. Basic Use
















5.1 Use of Web Viewer



Pic. 5—1 Web Viewer

Table. 5-1 Definition of Web Viewer Button Function

	Connect D1 (1 of Dual streaming)
	Connect D2 (2 of Dual streaming)
	Connect quad display channel
	Link to 'Administrator's Page'
	Connect each single channel
	Display Screen 100%. Double-clicking mouse on enlarged screen has the same function.
	Enlarge Video of a channel to full screen
	Display 4 channels simultaneously
	Enlarge 4-channel-display to full screen

	While pressing Mouse on the direction arrows for Pan/tilt, the camera moves in that direction as long as the mouse is depressed. The center arrow key will turn the unitized PTZ cameras off (Canon and Sony PTZ Cameras).
	Speaker on / off Speaker volume control
	Microphone (always activated) Microphone volume control
	Control Speed of pan/tilt - 'S' makes speed of Pan/tilt slow. 'F' makes speed of pan/tilt fast. (Some camera models will not respond)
	Zoom In: Pressing this button makes the lens Zoom-in. Un-pressing stops the function.
	Zoom Out: Pressing this button makes the lens Zoom-out. Un-pressing stops the function.
	Focus Far: Allows fine focus of Camera manually (far).
	Focus Near: Allows fine focus of Camera manually (near).
	Relay On.
	Relay Off.
Relay1 	Select preset to control.
	Move to the selected Preset
	Preset Tour: Move to preset location in regular sequence from No. 1 to 20.
	Bring camera menu on the screen. (Some camera models will not respond)
preset1 	Select preset to control.
	Go off beep sound to call.
	One-way audio communication.
	Two-way audio communication.
	Beep off.
	Designate the folder to record and capture live images.
	Capture Image on the screen.




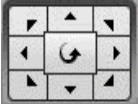
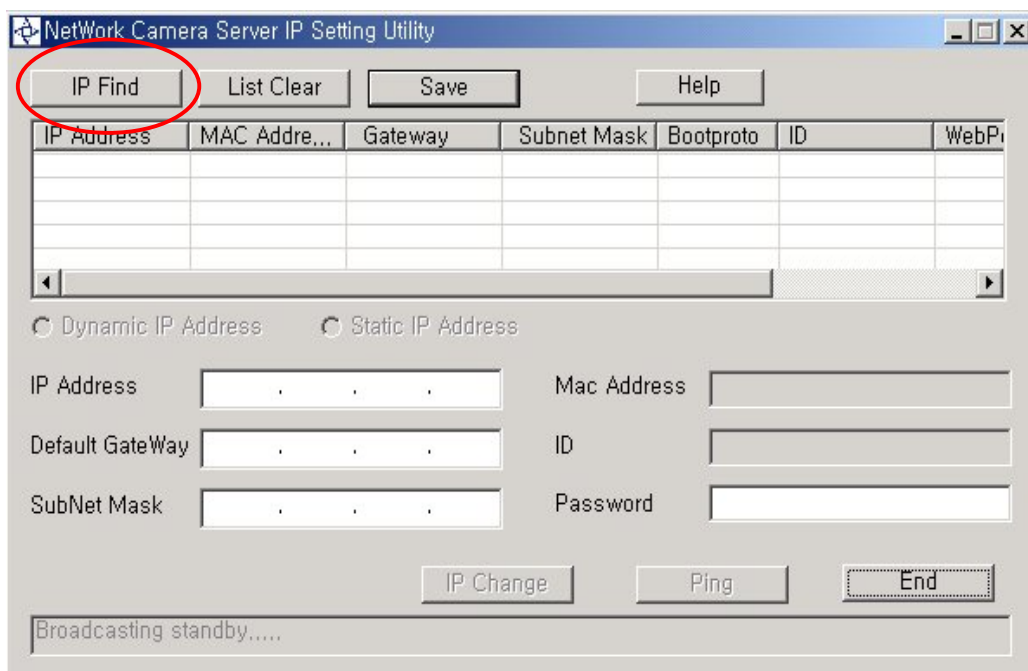
	Record live images.
	Stop Recoording.
Flickering on Screen and Alarm Sound	Upon detection of an Event on StreamVIEW, there will be a flickering on Screen and alarm will start beeping. To stop the sound, double-click on the flickering screen.

Table 5-2 Definition of Web Viewer Key Board

	
①	<ul style="list-style-type: none"> ✓ Number Key' ✓ Preset Move Function, ✓ The Number represents the Preset Number ✓ 20 Preset is controlled by Key Board ✓ Key Board 1 ~ 0 : Preset 1 ~ Preset 10 ✓ Key Board q ~ p : Preset 11 ~ Preset 20
③④	 <ul style="list-style-type: none"> ✓ Same function as
②⑤	<ul style="list-style-type: none"> ✓ Zoom-in, Zoom-out Function ✓ '+' is Zoom In, Pressing the key makes doing the function. Un-pressing stops the function ✓ '-' is Zoom Out, Pressing the key makes doing the function. Un-pressing stops the function.

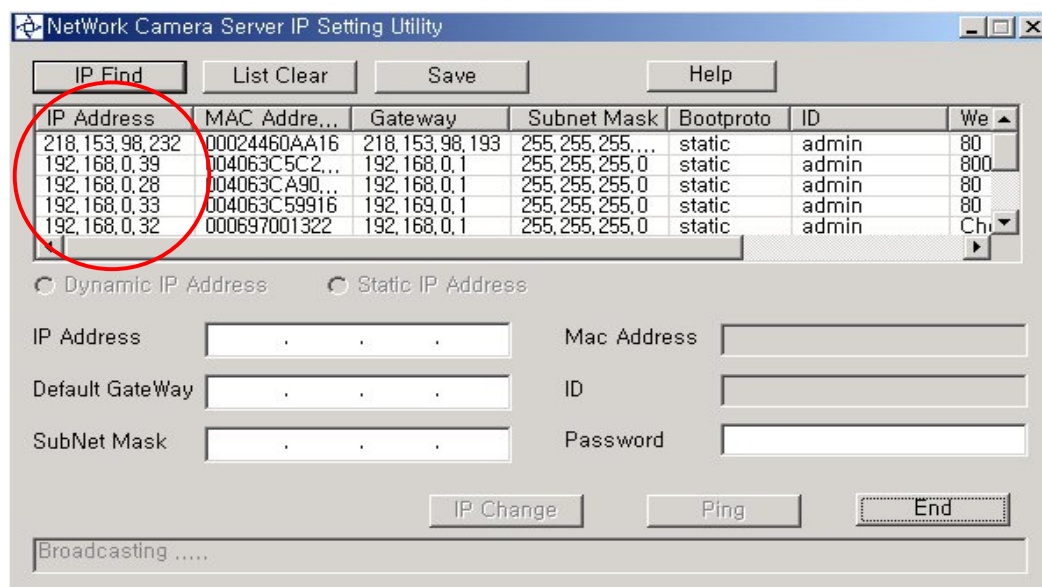
5.2 Use of IP Setting Utility

Upon running IP Setting Utility, the following program is to be displayed.



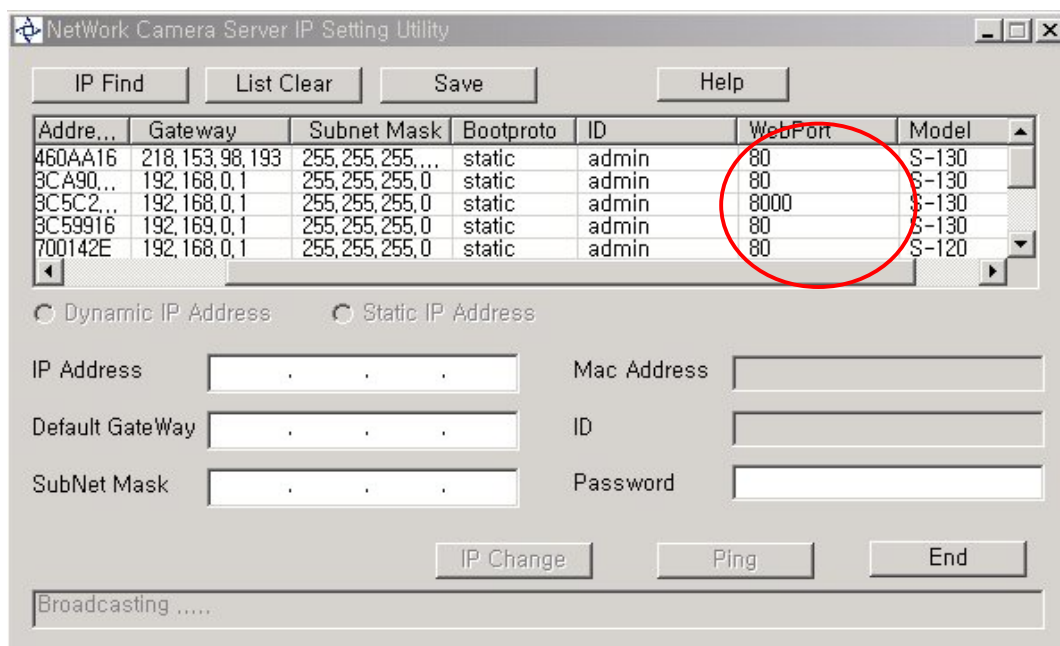
Pic. 5—2 IP Find

Click 'IP Find' Button to find IP of S-160 on local Network.



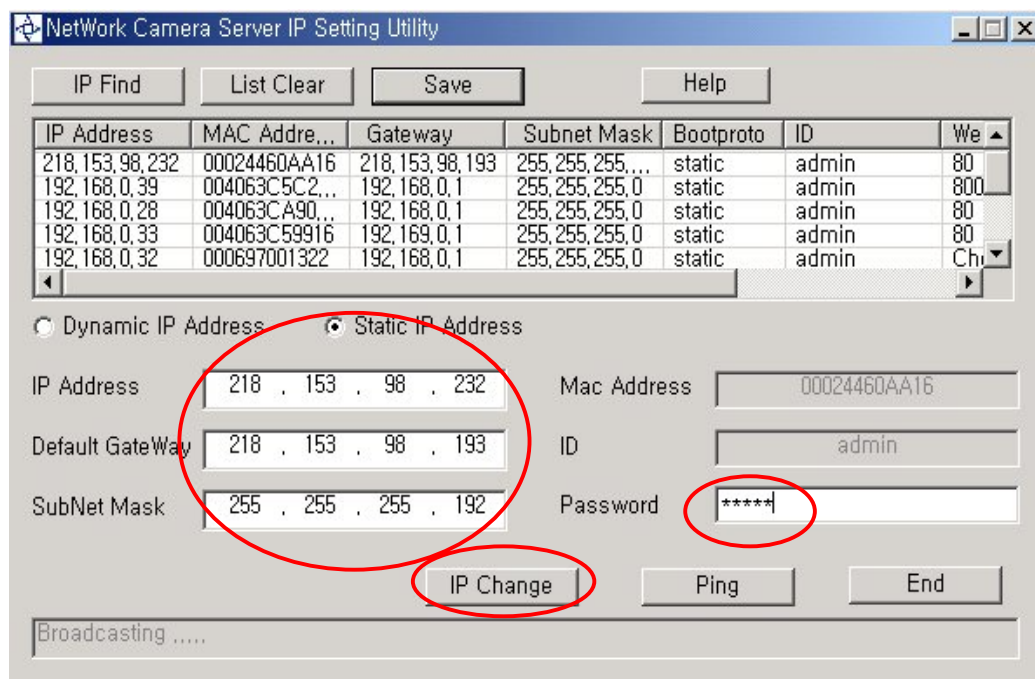
Pic. 5—3 Display IP

The following window shows list of IP along with Web Server Port Number and Model Name of S-160. Click 'IP Find' Button to find IP of S-160 on local Network.



Pic. 5—4 IP Check

After finding IP, double-click IP of S-160 to go to the editable Mode as follows.



Pic. 5—5 IP Setting

Input new IP Address, Default Gateway, Subnet Mask, and then input Password of S-160 Administrator and click 'IP Change', to set up new IP of S-160. Upon completion of setting, find new IP and click 'Ping' to check whether setting is done normally, and close the program by clicking 'End' button.

5.3 Use of PIMA Server

Run Web Browser and input <http://cryptotelecom.net> in URL and click 'Enter', then [Pic.5-6] will appear as follows.



Pic. 5—6 PIMA Server

Click the language user want to use.

5.3.1 User Registration

The screenshot shows a web page with a navigation bar at the top containing links: 'Login | Registration | Search Camera | Administrator'. Below the navigation bar is a box titled 'Please Login.' containing a login form. The form has two input fields: 'ID' and 'Password'. To the right of these fields is a 'Login' button. Below the input fields is a link that says 'Register Now'.

Pic. 5—7 User Login

Click 'Register Now' in [Pic.5-7].

Login | Registration | Search Camera | Administrator

If you agree to terms of service you can create an account.

Cryptotelecom™

Before you register our service, you must read this Article carefully.
If you agree with these Articles, then, please fill out registration form of Cryptotelecom

Article 1, (Purpose)
This Article specifies conditions of using and procedure about the service provided by Cryptotelecom Co, Ltd.

Article 2, (Effectiveness of article)
After registration, Cryptotelecom should notify its members and get consent from them for effectiveness.

Article 3, (Amendment of Article)
Cryptotelecom can amend this Article and then, put the details of amendment up on the website or give notice for effectiveness.

Article 4, (Making a contract for use)
When you register for the service provided by Cryptotelecom, please agree the button of

Do you agree with the above Articles?
After agreeing with the Articles, if you fill out registration, you can use the service provided by Cryptotelecom.

Agree, Disagree,

Pic. 5—8 Agreement

Read the Agreement carefully and click 'Agree' in case to agree, and go to the next page.

Welcome to subscriber of membership. (*)field is essential input field.

(*) ID	<input type="text"/>	Overlapping Check
(*) Password	<input type="password"/>	
(*) Password confirmation	<input type="password"/>	
(*) Name	<input type="text"/>	
Code	<input type="text"/> - <input type="text"/>	
E-Mail	<input type="text"/>	
Mobile Phone	<input type="text"/>	
Phone	<input type="text"/>	
Address	<input type="text"/> - <input type="text"/>	
Seller's Name	<input type="text"/>	
Seller's Phone	<input type="text"/>	

Pic. 5—9 User Registration

The part marked with (*) is mandatory. User ID is to be double-checked. Then click 'Log In'.

It became subscriber of membership.

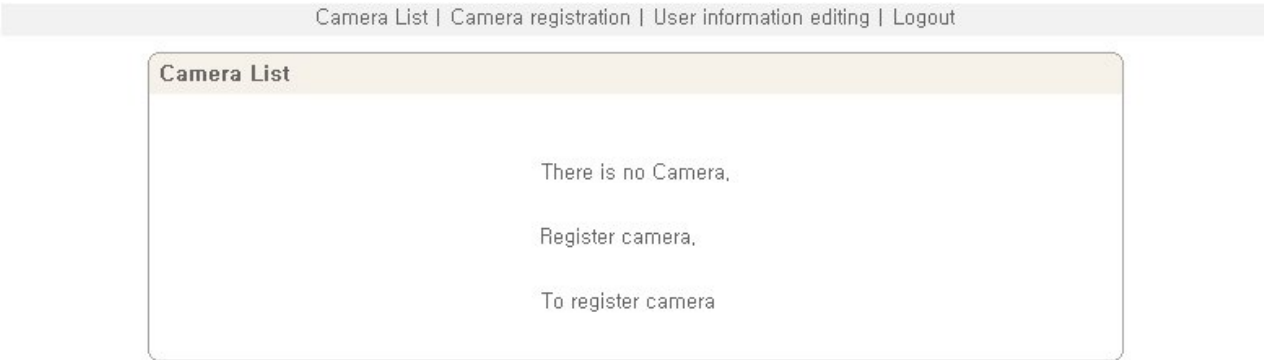
Can use normal service if login,

Login

Pic. 5—10 User Registered

If [Pic.5-10] appears, User Registration has successfully completed. Click 'Log-in' and input User ID and

password on [Pic.5-7] to connect to PIMA Server.



Pic. 5—11 PIMA Log-in Succeeded

5.3.2 Camera Registration

Click 'To register camera' in [Pic.5-11] to go to Camera Registration Page.

Camera List | Camera registration | User information editing | Logout

To register camera (*)field is essential input field.

(*)Camera Name

(*)Server Name cryptotelecom.net

(*)MAC ADDRESS (Are number that is mixed by 12 seats English and number of backside of camera.)

Camera open ☐ ENABLE ☒ DISABLE

Mobile open ☐ ENABLE ☒ DISABLE

Connect ID

Connect Password

EMAIL SERVICE ☐ ENABLE ☒ DISABLE (If want Email information use, select ENABLE.)

Email1

Message1

Email2

Message2

Email3

Message3

Email4

Message4

Email5

Message5

Pic. 5—12 Camera Registration

Input name of S-160 in ① of [Pic.5-12], which will be applied only in PIMA Server.

At ②, Server Name is to input Domain Name to connect to S-160. It is recommended to give the name easy to understand and remember as a Domain Name because it is available to connect to S-160 by Domain Name in case not knowing IP address of S-160. Domain Name should not be duplicated. Register it after checking

whether it is duplicated or not.

③ is to check whether the Camera is to be open or not. ④ is for the function to connect to S-160 easily by User's ID and Password registered in S-160, to monitor or control Video of S-160 on Mobile Phone. (Mobile Phone Users should tick "Enable" and input connection ID and Password.)

'EMAIL SERVICE' is the function to send the set message to E-mail address set by user upon alarm on S-160 in case user set the use of alarm server as Enable. (refer to '[Alarm Setting](#)' in '[4. Expert Setting](#)'). It is available to input up to 5 Mail address and input up to 5 messages upon checking on 'ENABLE'.

The screenshot displays a web form for 'Camera Registration'. At the top, there is a section for 'SMS SERVICE' with two radio buttons: 'ENABLE' and 'DISABLE'. A red text note next to 'DISABLE' says '(If want SMS use, select ENABLE,)'. Below this, there are five rows for entering mobile phone numbers and messages. Each row consists of a label (e.g., 'Mobile Phone No.1'), a text input field, and a label (e.g., 'Message1') followed by another text input field. At the bottom of the form, there is a button labeled 'To register camera'.

Pic. 5—13 Camera Registration

'SMS SERVICE' is the function to send the set message (SMS) from PIMA Server to Mobile Phone number set by user upon alarm on S-160, in case setting to use Alarm Server as 'ENABLE'. (refer to '[Alarm Setting](#)' of '[4. Expert Setting](#)'). It's available to input up to 5 Mobile Phone to get SMA Message and input up to 5 messages upon checking on 'ENABLE'.

Cautions : Input Mobile Phone Number without '-' or any space

Click 'Camera Registration' to save the registered information after input of all information.

5.3.3 List of Camera

Input the registered User ID and Password to connect to PIMA Server on [Pic.5-7].

Camera List

To register camera					
Number	Name	Editing	Connect	Alarm Log	Delete
1	s121	Editing	Connect	View	Delete
2	demo_s120	Editing	Connect	View	Delete
3	S151	Editing	Connect	View	Delete
4	s152	Editing	Connect	View	Delete

Pic. 5—14 Camera List

[Pic.5-14] shows the registered List of S-160. Upon clicking on 'Camera Name' registered in [Pic.5-14], [Pic.5-15] will show the Camera Information. 'Time' is the latest time for S-160 to report to PIMA Server.

Camera Information

MAC	IP	Login PORT				Stream PORT				WEB	TIME
		ch1	ch2	ch3	ch4	ch1	ch2	ch3	ch4		
00031D015905	218,153,98,224	9000				9001				80	2004-11-22 18:41:36

Pic. 5—15 Camera Information

On clicking 'Camera Change' on [Pic.5-14], the page of '[5.3.2 Camera Registration](#)' to change the information of Camera registered, will appear. Change the information and click 'Camera Change' to save the new information. 'MAC' is not changeable. To change 'Server Name', double-check is required. Upon clicking 'Camera Connect' on [Pic.5-14], the main page of S-160 will appear.

Upon clicking 'Alarm Log List' on [Pic.5-14], Event information transmitted to PIMA Server is to be displayed. Event information is to be saved up to 20. In case of full saving up to 20, it overwrites the oldest one.

Alarm log list

MAC ADDRESS : 00031d015905

<input type="checkbox"/>	Number	Time	Alarm kind	Channel	DownLoad
<input type="checkbox"/>	1	2004-11-22 18:30:32	MOTION	1	Video , Audio
<input type="checkbox"/>	2	2004-11-22 18:21:13	MOTION	1	Video , Audio
<input type="checkbox"/>	3	2004-11-22 18:16:09	MOTION	1	Video , Audio
<input type="checkbox"/>	4	2004-11-22 18:06:18	MOTION	1	Video , Audio
<input type="checkbox"/>	5	2004-11-22 18:02:06	MOTION	1	Video , Audio
<input type="checkbox"/>	6	2004-11-22 17:55:57	MOTION	1	Video , Audio
<input type="checkbox"/>	7	2004-11-22 17:37:59	MOTION	1	Video , Audio
<input type="checkbox"/>	8	2004-11-22 17:37:08	MOTION	1	Video , Audio
<input type="checkbox"/>	9	2004-11-22 17:35:08	MOTION	1	Video , Audio
<input type="checkbox"/>	10	2004-11-22 17:33:51	MOTION	1	Video , Audio

1 | 2 | 3 »

Pic. 5—16 Alarm Log List

'Alarm Log List' shows the information of a channel, alarmed time, type of Alarm. It is available to delete the log file. S-160 sends the recorded files, dividing into Video file and Audio files, to PIMA Server. In case there is no recorded file, the message will show 'No File'. In case the file has not sent to PIMA Server yet, the message "Uploading" will be shown. If Video and Audio has been downloaded in "Download" of [Pic.5-16], user can download and see the recorded file. "Camera Delete" of [Pic.5-14] is to delete the Camera from the list..

5.3.4 Change of User's Information

On clicking 'User's Information editing' in upper menu of [Pic.5-14], [Pic.5-17] will appear the page to change user's information.

Camera List | Camera registration | User information editing | Logout

Change User information (*)field is essential input field.

(*)ID smk0909

(*)Password 8577

NAME

E-Mail

Mobile Phone

Phone

Address -

Seller's Name

Seller's Phone

To change information

Pic. 5—17 Change User's Information

Save User's information by click 'To Change Information' after changing user's information.

5.3.5 Search Camera

Login | Registration | Search Camera | Administrator

Please Login.

ID

Password

Register Now

Login

Pic. 5—18 Search Camera

'Search Camera' of [Pic.5-18] is the function to see information of S-160 or connect directly to S-160 without user registration in PIMA Server. Upon clicking 'Camera Search' on [Pic.5-18], [Pic.5-19] to search Camera will appear. 'Type' on [Pic.5-19] is to select 'Camera Connect' to connect directly to S-160 using MAC Address, and then to input MAC Address of S-160 and click 'Yes', then S-160 will be directly connected.

Login | Registration | Search Camera | Administrator

Search Camera

MAC Address

Type

☒ Connect Camera
☐ Information

confirmation

Pic. 5—19 Search Camera

If user want to see information of S-160 by MAC Address, select 'Information' and input MAC Address of S-160 to see information on, and click 'confirmation' .Then Information of S-160 will be shown as [Pic.5-20].

Login | Registration | Search Camera | Administrator

Camera Information											
MAC	IP	Login PORT				Stream PORT				WEB	TIME
		ch1	ch2	ch3	ch4	ch1	ch2	ch3	ch4		
000697001313	218,153,98,232	9000				9001				800	2004-11-09 17:44:03

Pic. 5—20 See Information

5.4 Use of Relay

This is to select the relay mode whether to control in remote place or local place, as per setting of '[DIO Setting](#)' in '[4. Expert setting](#)'. The built-in relay of S-160 can be used up to AC250V/0.5A. In case more capacity is needed, please contact head office of Crypto telecom or local agent.



Pic. 5—21 Connection of Relay on S-160

As Relay has no polarity, any port of the line can be connected to plug in. Up to 2 Relay can be connected, and is to be controllable on Viewer, S-160 itself and Mobile Phone. In case to connect outer electric device (light lamp,) to S-160, there should be no separate Relay.

5.5 Use of Sensor

User can use either N/C sensor or N/O sensor according to setting in '[DIO Setting](#)' of '[4. Expert Setting](#)'.



Pic. 5—22 S-160 Sensor Connection

As sensor has no polarity either, any port of the line can be connected to plug in. Up to 2 Sensors can be connected to use.

5.6 See and Control of Still Image in Mobile phone or PDA

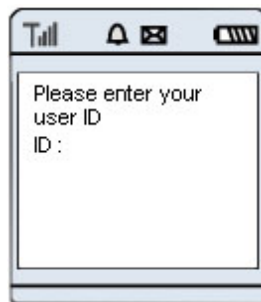
To monitor and control of Still Image of S-160 on Mobile Phone, register in '[Camera Registration](#)' of '[Use of PIMA Server](#)' in '[5. Basic Use](#)'.

Model of Mobile Phone supported is WAP2.0 Phone (HTML, JPEG) , PDA (Win CE).

5.6.1 WAP2.0 (HTML)

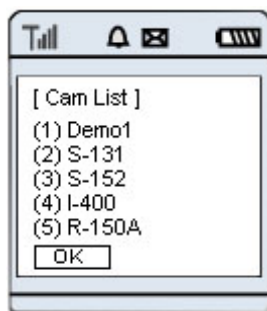
Connect to URL input line.

Input <http://cryptotelecom.net/240180.htm> or <http://cryptotelecom.net/320240.htm> and connect to PIMA Server.



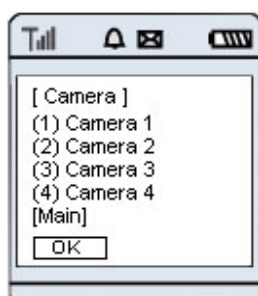
Pic. 5—23 Input User ID

On user ID input Page [Pic.5-24], input user's ID registered in '[Use of PIMA Server](#)' of '[5. Basic Use](#)'.



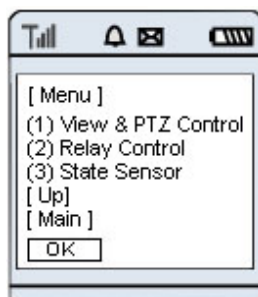
Pic. 5—24 List of Registered Products

Select one of the products (Camera or Server) registered by user on [Pic 5-25].



Pic. 5—25 Camera Channel

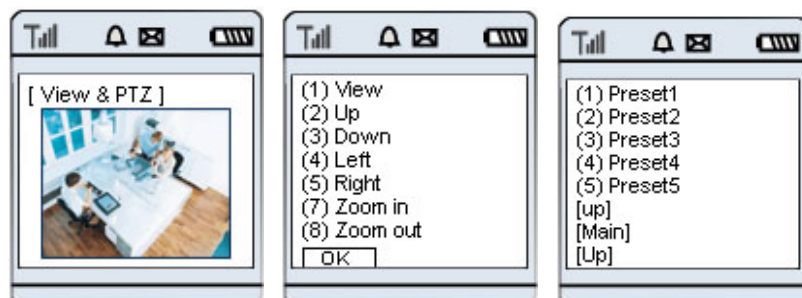
Select the Camera channel of S-160 on [Pic 5-26].

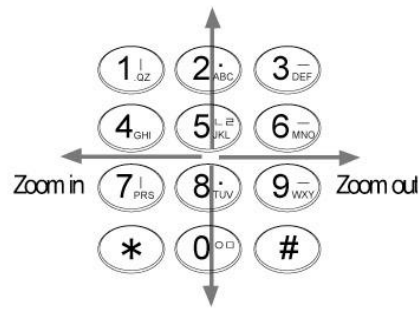


Pic. 5—26 Menu

Select a item in menu of [Pic.5-27].

- ✓ (1) Monitoring and Control of Pan/Tilt/Zoom/Preset

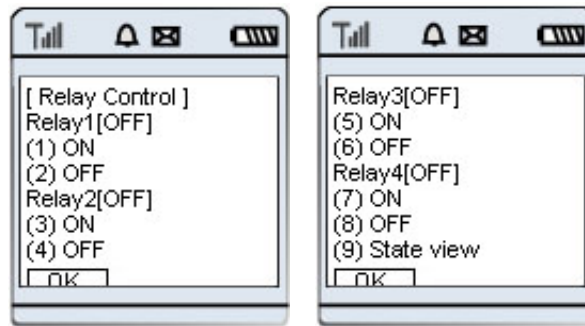




Pic. 5—27 Pan/Tilt/Zoom Control

It is available to see Image and control Pan/Tilt/Zoom/Preset. Number Key of Mobile Phone controls Pan/Tilt/Zoom.

- ✓ (2) Relay Control (2 Relay controllable)

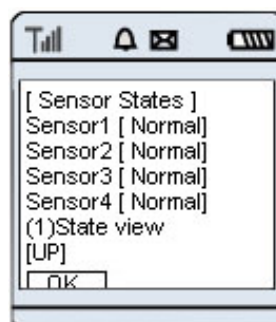


It is available to control up to 2 Relay. Relay Name and current status ([ON/OFF]) will be displayed.



On control of Relay, Image of controlled channel will be shown along with Relay name of the channel, ON/OFF is to be controllable. On selecting '(3) State view', current status of 4 Relays will be displayed.

- ✓ (3) Check Sensor Status



It shows the Sensor Name and current status ([Normal/Sensing]).

Connect to URL line as [Pic.5-29]. Input <http://cryptotelecom.net/wml.wml> in URL input line to connect to PIMA Server. On user ID Input Page, input user's ID registered in '[Use of PIMA Server](#)' of '[5. Basic Use](#)'. The way to use, monitor and control Image is same as one of '[5.6.1 016,018-KTF Phone \(mhtml\)](#)'.

5.6.2 PDA(WinCE)

Run 'Internet Explorer' of PDA and input http://cryptotelecom.net/pdah5450_eng.htm input in URL to connect to PIMA Server.



Pic. 5—28 PDA Log-in

On user ID Input Page [Pic.5-30], input user's ID registered in '[Use of PIMA Server](#)' of '[5. Basic Use](#)' and click 'connect' to log in.

[Cam List]

- (1)[smk](#)
- (2)[s-120_eng](#)
- (3)[s-120_1313](#)
- (4)[s151](#)
- (5)[r150a](#)
- (6)[s131](#)

Pic. 5—29 Products List

Select one of the products (Camera or Server) registered by user, in Products List of [Pic.5-31].

[Camera]

- (1)[Camera 1](#)
- (2)[Camera 2](#)
- (3)[Camera 3](#)
- (4)[Camera 4](#)
- [\[main\]](#)

Pic. 5—30 Camera Channel List

Select a channel to see and control Image from Camera List of [5 Pic.-32].

[Menu]
[\(1\)View&PTZ Control](#)
[\(2\)Relay Control](#)
[\(3\)State Sensor](#)
[\[UP\]](#)
[\[main\]](#)

Pic. 5—31 Menu

5.7 Use of Proprietary Viewer (MPEG4 Communicator)

5.7.1 Required Specification of PC and OS

Item	Min. Requirements	Recommended Specifications
CPU	Pentium III 800	Above Pentium IV 2.0G
Main Memory	128 MB	Above 256MB
O/S	Window 98 SE.	Window 2000 or XP
Web Browser	I.E 5.0	Above I.E 5.0
Resolution	1,024 X 768	1,160 X 864
Network	100Base-T Ethernet	100Base-T Ethernet

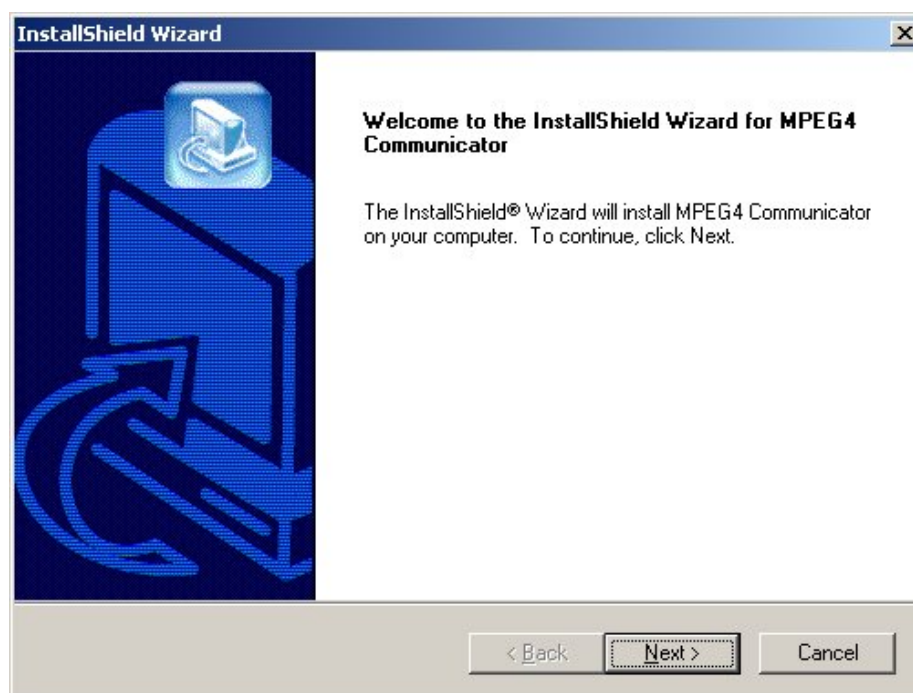
5.7.2 Supported O/S

- ✓ Windows 98 Second Edition (Korean OS, English OS, Japanese OS)
- ✓ Windows 2000 Professional (Korean OS, English OS, Japanese OS)
- ✓ Windows XP Professional / Windows XP Home Edition(Korean OS, English OS, Japanese OS)
- ✓ Windows 2000 Server (Korean OS, English OS, Japanese OS)

5.7.3 Program Installation

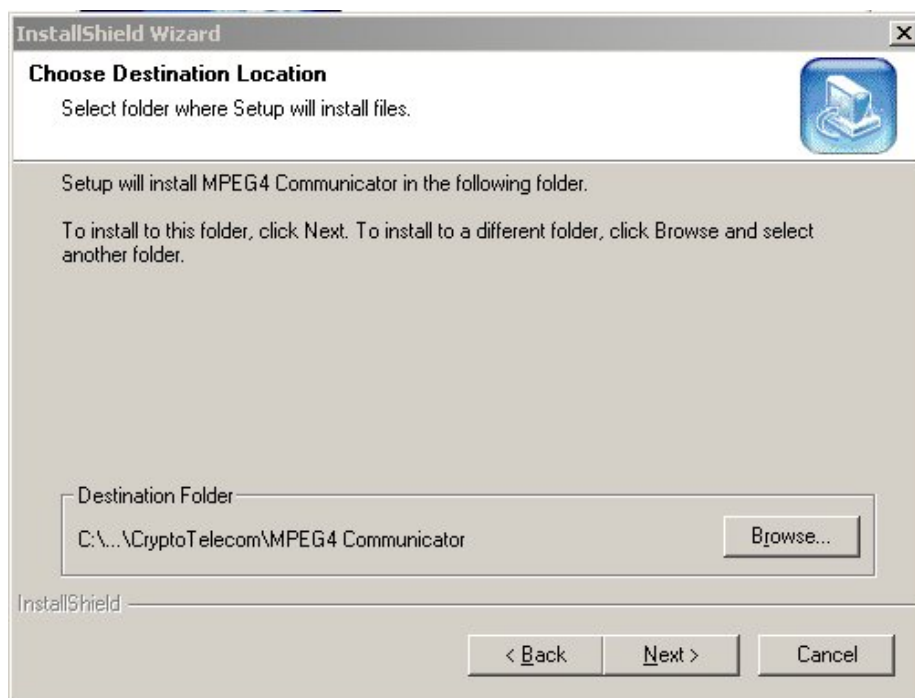


Pic. 5—32 Program Installation



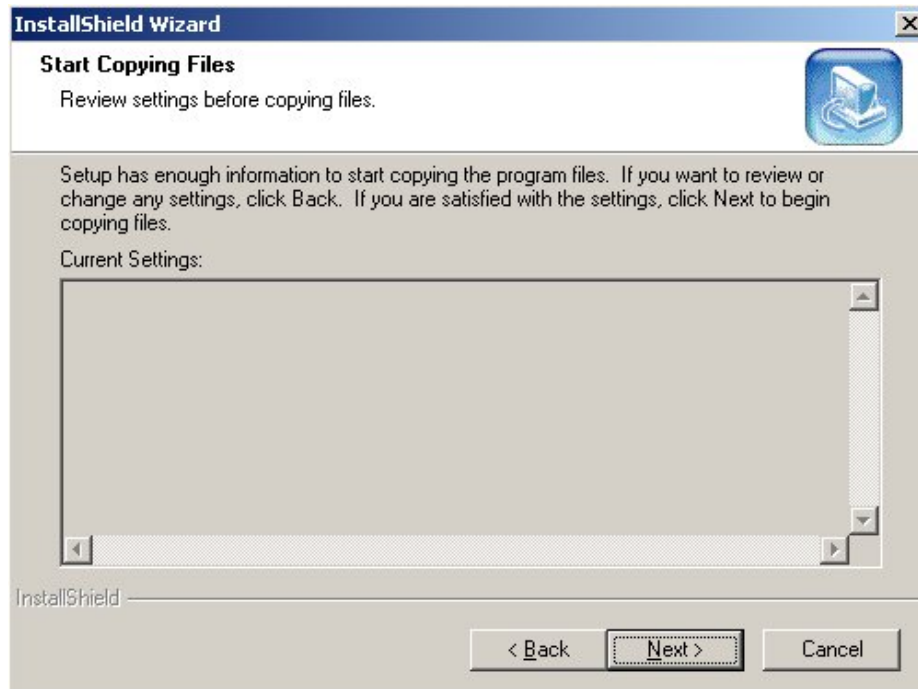
Pic. 5—33 Installation

click 'Next' Button.



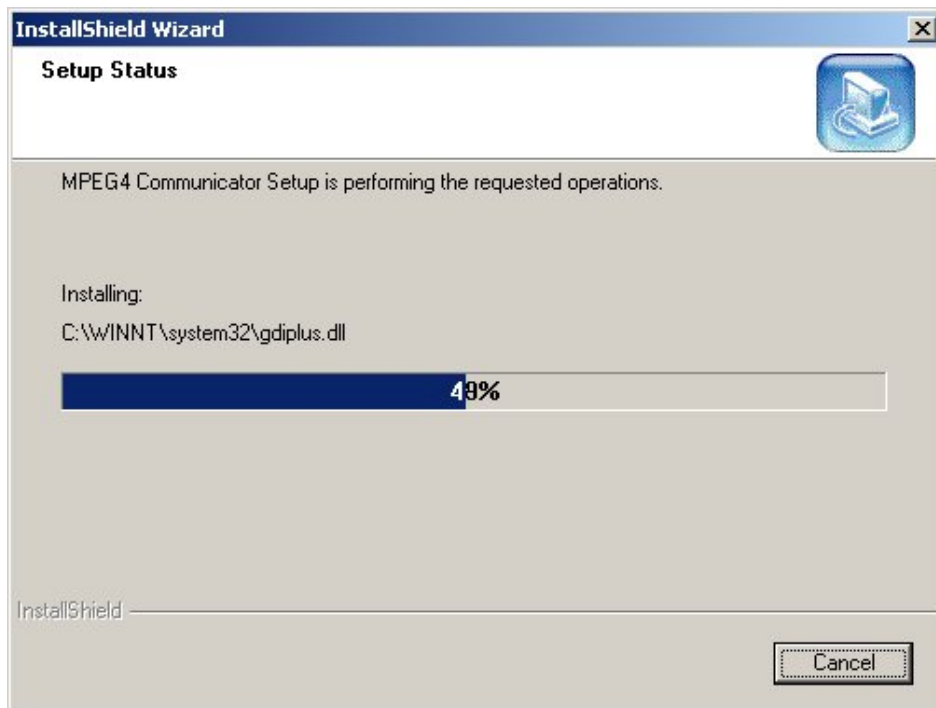
Pic. 5—34 Select Installation Folder

[Pic.5-34] is to select the folder where the program is to be installed. The route is changeable at user's option. To install in the default folder, click "Next" to go to the next step.

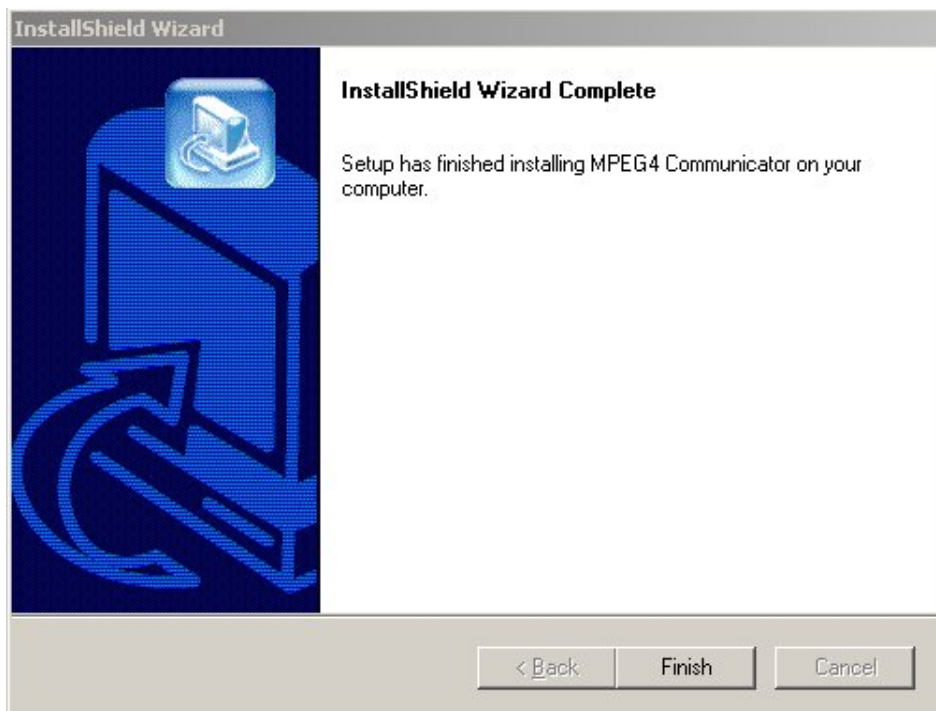


Pic. 5—35 File Copy Start

Click "Next" to start installation.



Pic. 5—36 Installation Status



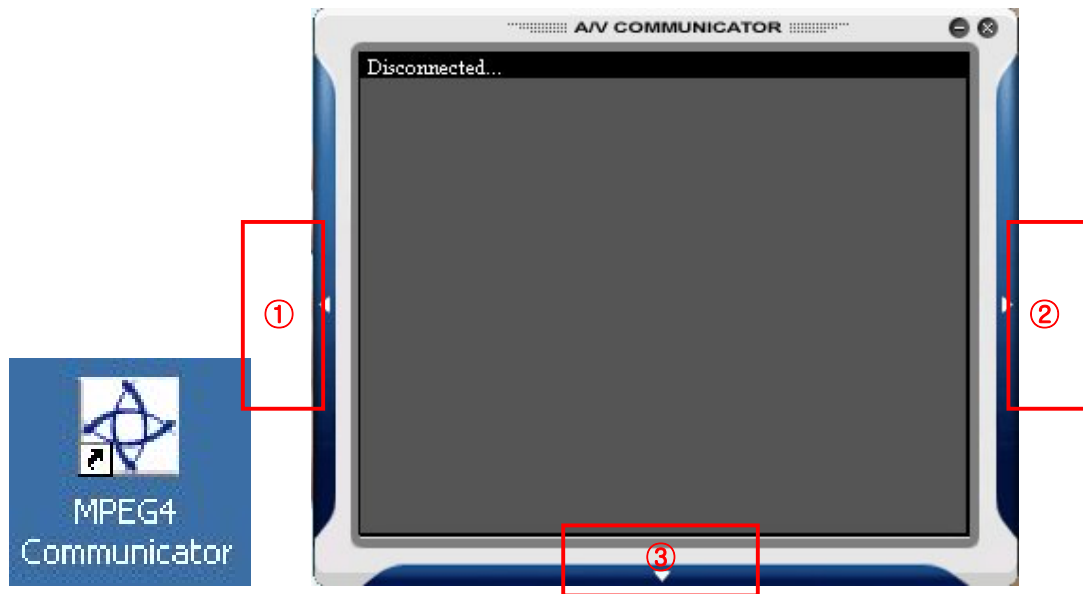
Pic. 5—37 Installation Completed

Upon completion of installation, click 'Finish' Button.

5.7.4 Use of Program

Upon installation, there will appear an icon of 'MPEG4 Communicator' on your PC. Double-click the icon to run the Program, and then Program will be run as [Pic.5-38].

5.7.4.1 Viewer Screen







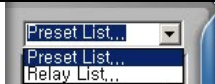













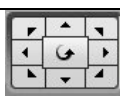



Pic. 5—38 Viewer Screen

Click 1,2,3, on [Pic 5-38], and then Menu of [Pic 5-39] will appear.

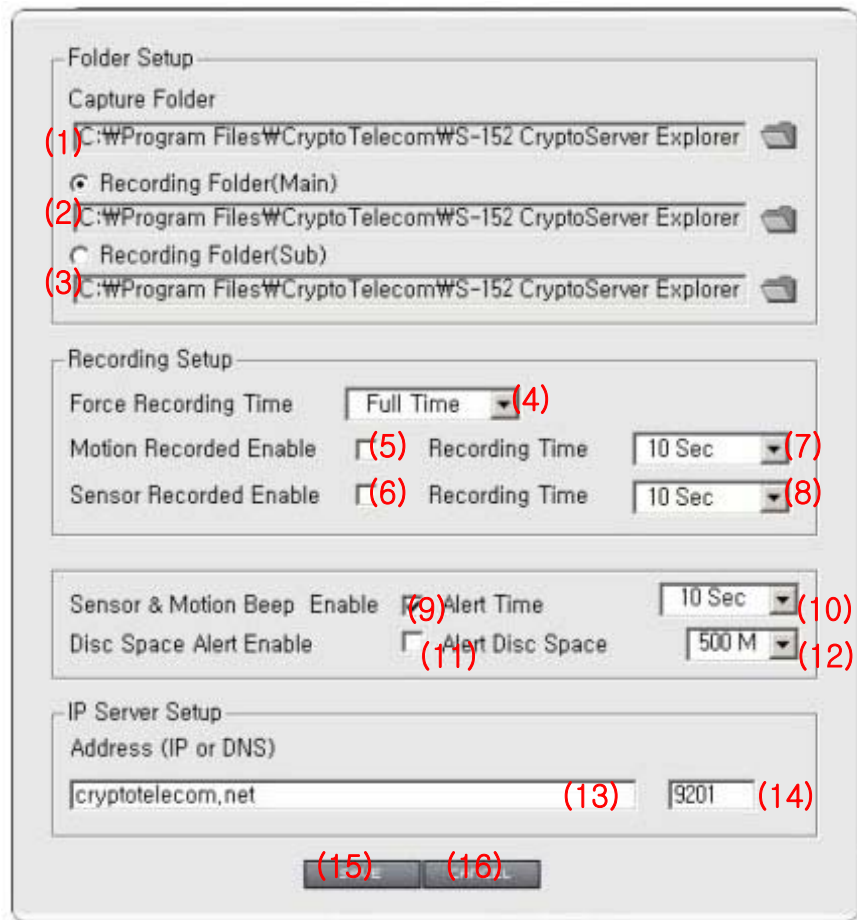


Pic. 5—39 Viewer Menu

Table 5-3 Definition of Viewer Menu

	Close Menu
	General Menu Setting ([Pic.5-40])
	Connect to Administrator's Page of S-160
	See Program Information
	Move to Preset Location set in Camera, Select Relay Control 1. Preset Move Double-click the name of Preset in the list to go to the preset location. 2. Relay Control Control Relay by clicking ON/OFF after select the Relay name in Relay List.
	Preset Tour. Move to preset location in regular sequence from No. 1 up to 20. Move to next one after 5 seconds pause on a preset location.
	Open the connection Window to connect to S-160 ([Pic.5-39])
	Disconnect S-160
	Slide Bar for displaying recorded file.
	Recording, Play, X2 Fast Play, Pause, Stop
	Open, Search and select File ([Pic.5-42])
	Capture Image on the screen
	Displaying current status of Viewer (Ready, Live: S-160 Connecting, Rec: Recording)
	Flickering upon Sensor Event
	Displaying Sensor name set in S-160
	Flickering upon Motion Event
	To connect or disconnect 1 way Audio
	To connect or disconnect 2 way Audio
	To control P/T of camera connected to S-160. (Pan/Tilt is controlled just by clicking on Screen, or clicking Direction Key on Keyboard)
	To control of the speed of Pan/Tilt of Camera (S:slow, F:fast)
	To control of Zoom (-: Zoom out, +:Zoom in)
	To control of focus of Camera

5.7.4.2 General Setting Menu



Pic. 5—40 General Setting Menu

Table 5-4 Description of General Menu

No	Description	No	Description
1	Select the directory to capture	11	Check the warning message of Disk Space before recording.
2	Designate the folder to record after select the directory to save the	12	Set the disk space to display the disk space warning on.
3	Recorded files.	13	Set the address of PIMA Server in case connecting to S-160 by the MAC Address (default : cryptotelecom.net)
4	Set the duration of passive recording (to be recorded during the time users selected)	14	Input Port Number of PIMA Server (Default Port : 9201)

5	Record upon Motion Event.	15	Save set value
6	Set the duration of Motion recording.	16	Close Window
7	Record upon Sensor Event		
8	Set the duration of Sensor recording.		
9	Select the beep sound enable or not upon event on Motion or Sensor.		
10	Set the duration of beep sound upon event on Motion or Sensor		

5.7.4.3 S-151 Connection

Click 'ON' of [Pic.5-39] to open S-160 Connection Page.

The screenshot shows the 'S-160 Connection Menu' interface. On the left is a pane labeled 'CryptoTelecom' and 'S-151 Demo' (1). The right side is titled 'Info.' and contains the following fields and controls:

- Server Name: S-152 Demo (2)
- Address Type: Radio buttons for IP (3) and MAC (4)
- IP Address: 192.168.1.8 (5)
- Port: 9000 (6)
- Audio: Radio buttons for Disable (7), Audio (8), and Bi-Audio (9)
- ID: guest (10)
- Password: ***** (11)
- Password save: Checked checkbox (12)

At the bottom of the window are six buttons: CONF (13), C (14), NEW (15), NEW (16), (17), and (18) TE.

Pic. 5—41 S-160 Connection Menu

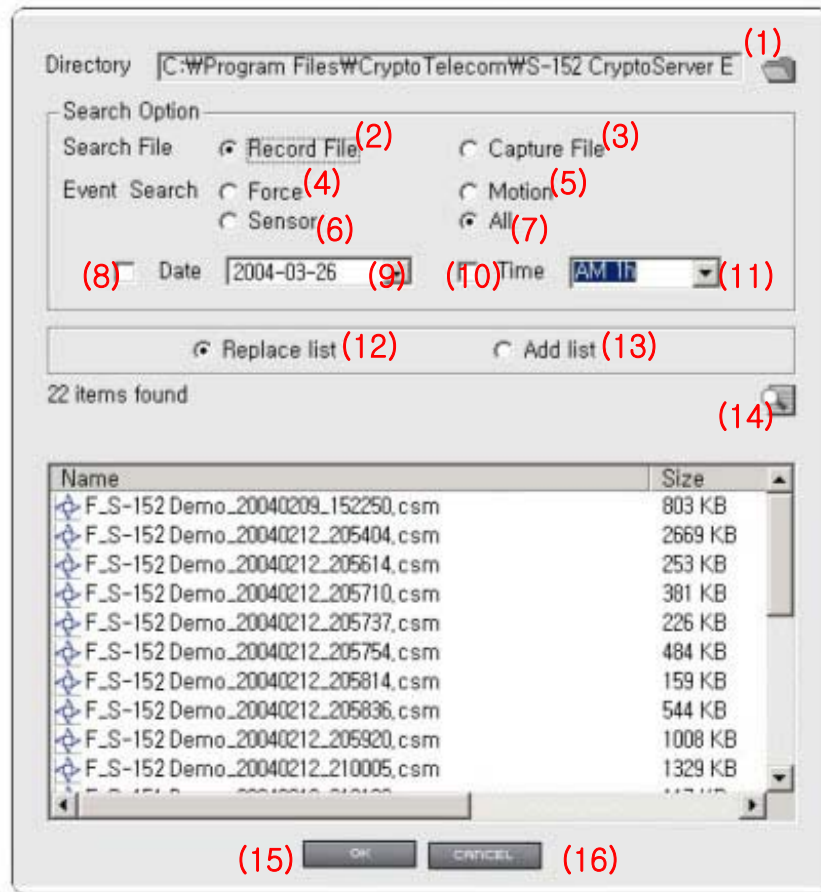
Table 5-5 Description of Connection Menu

No	Description	No	Description
1	List of S-160	13	Connect S-160 selected in the list
2	Name of S-160	14	Close the Connection Window
3	To connect by IP	15	Create new Folder
4	To connect by MAC Address	16	Add new Server
5	Input IP address (connection by IP), or MAC address (connection by MAC address)	17	Save set value
6	Input Port number for IP connection, or channel number for MAC address connection.	18	Delete the selected S-160 or Folder
7	Not to connect Audio		
8	For 1 way audio to listen only		
9	For 2 way audio communication		
10	Input User ID		
11	Input User Password		
12	Save Password		

Input the information of S-160 to be connected in [Pic.5-41] and save it. Connect to S-160 by clicking 'CONNECT' Button on [Pic.5-41]. It is available to control Pan/Tilt/Zoom, Preset, Relay, Audio connection according to user's requirements.

5.7.4.4 Play of Recorded File

Click 'Open File' on [Pic.5-39].



Pic. 5—42 Play Recorded File

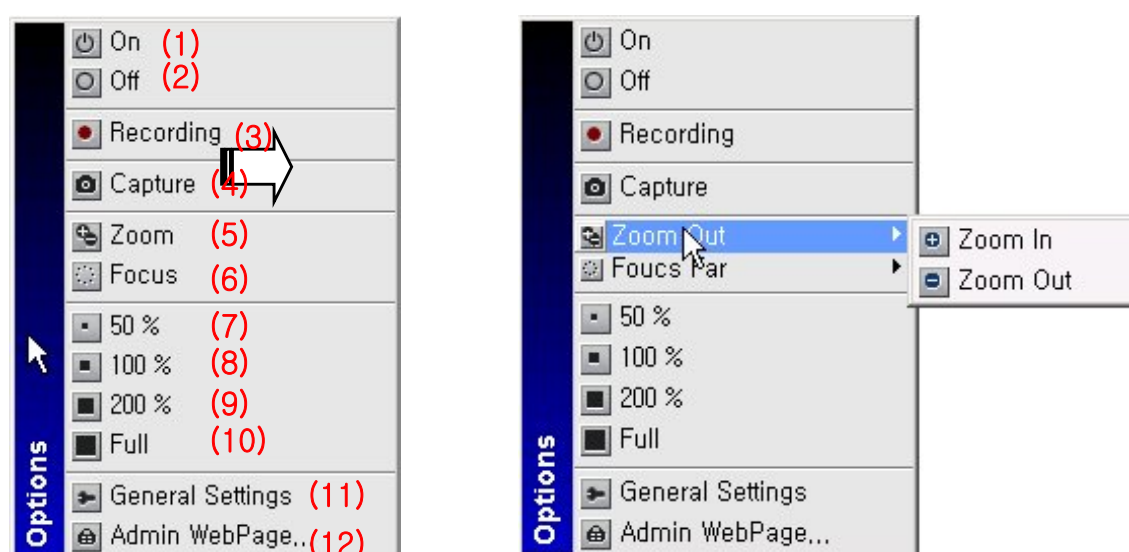
Table 5—6 Play Recorded Files

No	Description	No	Description
1	Select the folder of recorded files.	13	Search additional file on the searched list.
2	Search recorded files	14	To search file
3	Search Captured files	15	Play the selected file
4	Search passive recording files	16	Close file menu
5	Search Motion recording files		
6	Search Sensor recording files		
7	Search all recorded files or Captured files		

8	Search files by the date		
9	Select the date to search		
10	Search files by the hour		
11	Select the hour to search		
12	Delete file list and search on new list		

5.7.4.5 Use of Pop-up Menu

The Pop-up Menu of [Pic.5-43] will appear, upon clicking the right button on the Screen during monitoring Video on S-151,



Pic. 5—43 Pop-up Menu

Table 5-6 Description of Pop-up Menu

No	Description	No	Description
1	Open the connection window with Server List [5 Pic.-41])	8	100% Screen
2	Disconnect Server	9	200% Screen
3	Record or stop recording	10	Full Screen
4	Capture image	11	See the general setting Page ([5-40])
5	Menu to control Zoom of Camera	12	Connect to Administrator's Page
6	Menu to control Focus of Camera		
7	Screen size of 50%		

6. Network Environments

6. Network Environments

It is required to follow the recommendation of the environments where S-160 will be installed or the similar environments.

5-1. Private line Environment

Usually Company, University, Research center uses the leased line. They use many public IP addresses. In order to install S-160 under this environment, select "Static IP Address" in '[Static IP Setting](#)' of '[3. Basic setting](#)' and input IP address, subnet mask and gateway. If there is DHCP server on the network, select 'Dynamic IP Address' in '[Dynamic IP](#)' of '[3. Basic Setting](#)'. You can get all the information (IP address, subnet mask, gateway, DHCP server) from the network administrator. Sometimes, the S-160 may not work properly if the user installed firewall for security purpose. In this case, open the port on the S-160, then it will work properly. You can check the current port of S-160 from the "Administrator's Page"->"Network Setting"->"Port Setting" (see '[3. Basic Setting](#)'). The default port is set on ex-factory as follows :

- Web Connection Port: Port 80 TCP
- Authentication and Control Port: Port 9000 TCP
- Video Streaming Port: Port 9001 TCP
- 1 way Audio Port: Port 9002 TCP
- 2 way Audio Port : Port 9003 TCP

5-2. Broadband (ADSL, Cable, Fiber Optic) Modem Environment

Home, store, small office use one Broadband modem (DSL, Cable Modem), and use one public IP address normally. In order to use several PC through one Public IP address, the user in most cases use IP sharing device. We recommend using an IP router (IP Sharing device) to install the S-160. There may be a case in no need of router, but most people use S-160 and other PC 1set or more. When using the router, connect the router and input IP address of S-160 (IP address of S-160 is set as 192.168.1.8 on ex-factory) in DMZ menu. If the user cannot use the DMZ function because there is no DMZ menu in the router or some other reasons, go into port forwarding or NAT menu on the router and map the port of S-160 one by one. User can check the current port setting of S-160 from "Administrator's Page"->"Network Setting"->"Port Setting" (see '[3. Basic Setting](#)'). Manufacturer's setting of S-160 is as follow on ex-factory : (The user can change port if necessary).

- Web Connection Port : Port 80 TCP
- Authentication and Control Port : Port 9000 TCP
- Video Streaming Port : Port 9001 TCP
- 1 way Audio Port : Port 9002 TCP
- 2 way Audio Port : Port 9003 TCP

7. Appendix

7. Appendix

Appendix A **Basic Setting Table**

Item	Default (Basic Setting)	Remarks
Network Setting		
Static IP / Dynamic IP	Static IP	
IP Server	Enable	
IP Address	192.168.1.8	
Gateway	192.168.1.1	
Subnet Mask	255.255.255.0	
Web Connection Port	80	*. Do not register the same Port. *. Register Number with '9999' or less Some Network may not support over number 10000 port.
Authentication /Control Port	9000	
Video Streaming Port	9001	
One way Audio Port	9002	
Two way Audio Port	9003	
ID and Password		
Administrator ID /Password	admin/admin	
User ID	root/root, guest/guest	
Domain of Related Server		
IP Server	cryptotelecom.net	Domain of Server to connect to register IP
Alarm Server	cryptotelecom.net	Domain of Server to connect to send Event upon detection of Sensor or Motion.
Upgrade Server	cryptotelecom.net	Domain of Server to connect to download upgraded program
Plug-in Download Server	cryptotelecom.net	
Video Setting		
Compressed Resolution	704*480	
Video Format	NTSC/PAL	

Frame Rate	15fps	
Bit Rate	200kbps	
Other Setting		
Time Zone	Asia/Seoul(Korea)	

*. Note : In case to reset Hardware and Network Setting, ID and Password of User and Administrator will be automatically returned to the above default value.

Appendix B Specification of Products

Item	Specification	Item	Specification
Summary			
OS	Linux	CPU	ARM 200MHZ
Network Interface	RJ45 10/100BaseT	Setting	IP Setting : Proprietary Program Other Setting : by Web Browser
Network Support	Leased Line, Cable Modem, HomePNA Support Dynamic IP and Static IP Usable under Router for ADSL	Web Server	User Homepage Upload and Saving Function Server Setting Function Web Viewer Download Page
Viewer Software Compatible	WINDOWS 98,SE WINDOWS 2000, WINDOWS XP, WINDOWS NT	Supporte d Protocol	HTTP,FTP,TCP/IP, DHCP, ARP, DNS, ICMP
		Security	USER AUTHENTICATION
Operation Environment			
OperationTemp	5 ~ 40℃	Storage Temp.	-10 ~ 70℃
Humidity	20-80% Relative Humidity	Location	INDOOR ONLY
Case			
Size	222mm[W]*148mm[D]*38mm[H]		
IMAGE			
Compression	MPEG-4(SIMPLE VIDEO ROFILE)	Frame Rate	30FPS[max]
Resolution	704*480,352*480, 352*240		
Bit Rate	100kbps ~ 500kbpS	Compres sion Rate	200:1(Typical)

Video Format	NTSC/PAL		
Input / Output			
Digital In	2Port – Open/Close Input	Digital Out	2 Ports – Relay Open/Close Normal Open Max current :0.5A Max voltage :240VAC
Peripheral device Communication	RS232 1Port, RS485 1 Port (select one of them)	Ethernet	RJ45
Video Input	BNC Jack	Video Output	BNC Jack - Loop Through Out
Function and Features			
Simultaneous Access	Max. 50 users (under 10 Users recommended)	Alarm Mode Function	Detect Sensor Input and Drive Event
Viewer	Proprietary Viewer, and Web Plug-in Viewer to be down-Loaded from remote server	Video Recording	Recording in Viewer or FTP Server upon Alarm Event
Web Page	Upload of user Web Page Through FTP	E-mail message	Send E-mail in Alarm Mode upon Event
Dynamic IP	Support	IP Router	Support
Hardware Reset	In case user forgets Administrator's Information and can't change camera setting, Administrator's ID and Network Information is to be reset on default value	SMS	Short Message Service through Alarm Server upon Event
Electronic Specifications			
Adapter	Input : 100/220VAC ,		

	Output :12V/1.5A		
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Appendix C **To solve problem**

C-1 Basic Check-point

C-1-1 Booting

- Check if power plug is connected correctly.
- Power Cable : Use cable for S-160, contained in Product box.
- Power LED : The front left LED twinkles on upon supplying Power.

C-1-2 Network cable (LAN cable) and cable connection check

- Check if network cable is straight LAN cable. Hold each end of both side and check if same color's cable is connected to same location in RJ-45 jack or not.
- Check if network cable connects correctly with S-160.
- Check if network cable connects correctly with Hub, IP sharing device and cable modem etc....

C-1-3 CCTV camera

- Check if video cable of camera is connected correctly with Video-in port that is located in the rear side of the server.
- If video doesn't appear even though connection is correct, connect camera with CCTV monitor or video-in port of TV and check if video can be seen.

***. If you found a problem in the product, first check with “C-1 Basic check point” and solve the problem as following procedures:**

C-2 Troubleshooting by type

C-2-1 Cannot connect with network

- Check with 'C-1-2 Network Cable (LAN cable) and cable connection check'.
- PING Test
 - In case Camera uses Static/Public IP: input "Ping IP address" to command window of PC and check response.
 - In case user cannot find camera IP address when camera uses dynamic/public IP, reset hardware and connect PC with S-160 through cross cable and ping test by entering "192.168.1.8".
 - In case camera uses private IP through IP sharing device: do ping test of private IP address set for S-160 in PC that is connected in the local network through IP sharing device.
- If "ping test" get response, network setting for camera is done correctly.
- If ping test is okay but there is no connection, check with 'C-2-2 check port setting'.

C-2-2. Check Port Setting

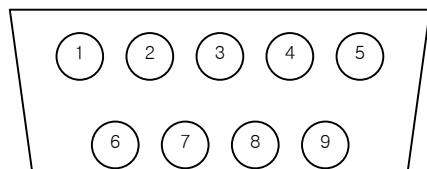
- If user can't connect with camera even though 'Ping test' is okay, please check port setting by the

following steps.

- S-160 uses 3 ports as follow.
 - Web Connection Port : Port 80 TCP
 - Authentication and Control Port : Port 9000 TCP
 - Video Streaming Port : Port 9001 TCP
 - One way Audio Port : Port 9002 TCP
 - Two way Audio Port : Port 9003 TCP
- If it is not available even to connect to web, check web connect port because web connect port may be set with other number than '80'.
- In case there is problem in video monitoring even though there is no problem in Web connection, check if 'Authentication and Control Port' and 'Video Streaming Port' of S-160 is set on IP sharing device (in case of using IP sharing device).
- For setting of IP sharing device Port, refer to 'IP sharing device setting'.
- In case web page can't be connected under super highway internet line, some super highway ISP company may block the use Web port number 80. In this case, change to other number from web connection port setting.

Appendix D Serial port (RS232c) explanation and example

D-1 Pin Number



D-2 Pin Signal

- No 1 : Not Used
- No 2 : RxD
- No 3 : TxD
- No 4 : Not Used
- No 5 : GND
- No 6 : Not Used
- No 7 : RTS
- No 8 : CTS
- No 9 : Not Used

D-3. In case of connection with and control of "Analog Pan/Tilt/Zoom Camera [VC-C4R]" of Canon.

S-160 (VC-C4R)[Canon's Analog P/T/Z Camera]

9` Pins 8Pins

DSUB(Female) Mini DIN Connector

Shield

